8.14 E-UTRAN TDD - FDD Inter-frequency Measurements

8.14.1 E-UTRAN TDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

8.14.1.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions in asynchronous cells within the E-UTRA TDD-FDD inter-frequency cell search requirements. This test will partly verify the TDD-FDD inter-frequency cell search requirements in section 8.1.2.3.3.

8.14.1.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bit 25.

8.14.1.3 Minimum conformance requirements

When measurement gaps are scheduled the UE shall be able to identify a new FDD inter-frequency within $T_{Identify_Inter}$ according to the following expression:

$$\mathbf{T}_{\text{Identify_Inter}} = \mathbf{T}_{\text{Basic_Identify_Inter}} \cdot \frac{480}{\mathbf{T}_{\text{Interl}}} \cdot N_{\textit{freq}} \quad \textit{ms}$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new FDD inter-frequency cell is defined.

N_{freq} is defined in TS 36.133 [4] section 8.1.2.1.1 and T_{Interl} is defined in TS 36.133 [4] section 8.1.2.1.

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP Ês/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in Section 9.1 are fulfilled,
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

When measurement gaps are scheduled for FDD inter frequency measurements the UE physical layer shall be capable of reporting measurements to higher layers with measurement accuracy as specified in TS 36.133 sub-clause 9.1.3 with measurement period given by table 8.14.1.3-1.

Table 8.14.1.3-1: RSRP measurement period and measurement bandwidth

Configuration	Physical Layer Measurement period:	Measurement bandwidth [RB]
	T _{Measurement_Period_Inter_FDD} [ms]	
0	480 x N _{freq}	6
1 (Note)	240 x N _{freq}	50
Note: This config	guration is optional.	

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per FDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with the measurement period defined in Table 8.14.1.3-1.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T _{identify_inter} defined in TS 36.133 [4] clause 8.1.2.3.1.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.2.1.1 becomes undetectable for a period \leq 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period\ Intra}$ provided the timing to that cell has not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.1 and A.8.14.1.

8.14.1.4 Test description

8.14.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.15.
- 2. The general test parameter settings are set up according to Table 8.14.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.14.1.4.3.
- 5. There are two E-UTRA carriers and one E-UTRA TDD Cell 1 and one E-UTRA FDD Cell 2 on each carrier specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.14.1.4.1-1: General test parameters for E-UTRAN TDD-FDD inter-frequency event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
Cell 1 PDSCH parameters		DL Reference Measurement	As specified in section A.1.2
		Channel R.0 TDD	
Cell 1		DL Reference Measurement	As specified in section A.2.2
PCFICH/PDCCH/PHICH		Channel R.6 TDD	
parameters			
Cell1 Special subframe		6	As specified in table 4.2-1 in TS 36.211.
configuration			
Cell1 Uplink-downlink		1	As specified in TS 36.211 section 4.2
configuration			Table 4.2-2.
Cell 2 PDSCH parameters		DL Reference Measurement	As specified in section A.1.1
		Channel R.0 FDD	
Cell 2		DL Reference Measurement	As specified in section A.2.1
PCFICH/PDCCH/PHICH		Channel R.6 FDD	
parameters			
Cell 1 E-UTRATDD RF		1	One TDD carrier frequency is used.
Channel Number			
Cell 2 E-UTRA FDD RF		2	One FDD carrier frequency is used.
Channel Number			
Channel Bandwidth	MHz	10	
(BW _{channel})			
Active cell		Cell 1	Cell 1 is on RF channel number 1
Neighbour cell		Cell 2	Cell 2 is on RF channel number 2
Gap Pattern Id		0	As specified in TS 36.133[4] section
			8.1.2.1.
A3-Offset	dB	-6	
Hysteresis	dB	0	
CP length		Nomal	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF
Time offset between cells		3 ms	Asynchronous cells
T1	S	5	
T2	S	5	

8.14.1.4.2 Test procedure

The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of cell 2. Gap pattern configuration #0 is configured before T2 begins to enable inter-frequency monitoring.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Table 8.14.1.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.14.1.5-1.
- 6. UE shall transmit a MeasurementReport message triggered by Event A3. If the measurement reporting delay from the beginning of time period T2 is less than 3842ms the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.
- 7. After the SS receive the MeasurementReport message in step 6) or when T2 expires, the SS shall trans mit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.

- 8. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.14.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.14.1.4.3-1: Common Exception messages for E-UTRAN TDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
·	Table H.3.1-9			

Table 8.14.1.4.3-2: ReportConfigEUTRA-A 3: Additional E-UTRAN TDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-6 ReportConfigEUTRA-A3						
Information Element	Value/remark	Comment	Condition			
ReportConfigEUTRA ::= SEQUENCE {						
triggerType CHOICE {						
event SEQUENCE {						
eventld CHOICE {						
eventA3 SEQUENCE {						
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)				
reportOnLeave	FALSE					
}						
}						
Hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)				
timeToTrigger	0 (0 ms)					
}						
}						

Table 8.14.1.4.3-3: *MeasResults*: Additional E-UTRAN TDD-FDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 8.14.1.4.3-4: MeasResultListEUTRA: Additional E-UTRAN TDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity	Cell 2	
meas Result SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
}			

8.14.1.5 Test requirement

Tables 8.14.1.4.1-1 and 8.14.1.5-1 define the primary level settings including test tolerances for event triggered reporting under fading propagation conditions in asynchronous TDD-FDD inter frequency cells test.

Table 8.14.1.5-1: Cell specific test parameters for E-UTRAN TDD-FDD inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells

Parameter	Unit		II 1	Cell 2		
		T1	T2	T1	T2	
E-UTRA RF Channel		1		2		
Number						
BW _{channel}	MHz	10 10			10	
OCNG Patterns						
defined in D.2.1 (OP.1		OP 1	TDD	OP.2 FDD		
TDD) and in D.1.2		0	.55		- 1 5 5	
(OP.2 FDD)						
PBCH_RA	dB					
PBCH_RB	dB					
PSS_RA	dB					
SSS_RA	dB					
PCFICH_RB	dB					
PHICH_RA	dB					
PHICH_RB	dB	()	0		
PDCCH_RA	dB					
PDCCH_RB	dB					
PDSCH_RA	dB					
PDSCH_RB	dB					
OCNG_RA ^{NOIE 1}	dB					
OCNG_RB ^{Note 1}	dB					
$N_{oc}^{ m Note~3}$	dBm/15 kHz			-98		
RSRP Note 4	dBm/15 kHz	-94.00	-94.00	-Infinity	-90.70	
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4.00	4.00	-Infinity	7.30	
SCH_RP ^{Note 4}	dBm/15 kHz	-94.00	-94.00	-Infinity	-90.70	
\hat{E}_s/N_{oc}	dB	4.00 4.00		-Infinity	7.30	
Propagation Condition			E	TU70		

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A3 triggered measurement report, with a measurement reporting delay less than 3842 ms from the beginning of time period T2.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A3 triggered measurement report to Cell 2.

The overall delays measured in the test may be up to $2xTTI_{DCCH}$ higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = 3840 ms

TTI insertion uncertainty = $TTI_{DCCH} = 1$ ms; $2xTTI_{DCCH} = 2$ ms

The overall delays measured shall be less than a total of 3842 ms in this test case (note: this gives a total of 3840 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

8.14.2 E-UTRAN TDD-FDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

8.14.2.1 Test purpose

To verify the UE's ability to make a correct reporting of an event in DRX under fading propagation conditions in asynchronous cells within the E-UTRA TDD-FDD inter-frequency cell search requirements.

8.14.2.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bits 5 and 25.

8.14.2.3 Minimum conformance requirements

When measurement gaps are scheduled the UE shall be able to identify a new FDD inter-frequency within $T_{Identify_Inter}$ as shown in table 8.14.2.3-1:

Table 8.14.2.3-1: Requirement to identify a newly detectable FDD inter-frequency cell

DRX cycle	T _{identif y_inter} (s) (DRX cycles)				
length (s)	Gap period = 40 ms	Gap period = 80 ms			
≤0.16	Non DRX Requirements in	Non DRX Requirements in			
	TS 36.133 [4] clause	TS 36.133 [4] clause			
	8.1.2.3.1.1 are applicable	8.1.2.3.1.1 are applicable			
0.256	5.12*N _{freq} (20*N _{freq})	7.68*N _{freq} (30*N _{freq})			
0.32	6.4*N _{freq} (20*N _{freq})	7.68*N _{freq} (24*N _{freq})			
0.32 < DRX-	Note (20*N _{freq})	Note (20*N _{freq})			
cycle ≤ 2.56		·			
Note: Time depends upon the DRX cycle in use					

The non DRX requirements in TS 36.133 [4] clause 8.1.2.3.1.1 states that when measurement gaps are scheduled the UE shall be able to identify a new FDD inter-frequency within $T_{Identify\ Inter}$ according to the following expression:

$$\mathbf{T}_{\mathrm{Identify_Inter}} = \mathbf{T}_{\mathrm{Basic_Identify_Inter}} \cdot \frac{480}{\mathbf{T}_{\mathrm{Interl}}} \cdot N_{\mathit{freq}} \quad \mathit{ms}$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new FDD inter-frequency cell is defined.

 N_{freq} is defined in TS 36.133 [4] section 8.1.2.1.1 and T_{Interl} is defined in TS 36.133 [4] section 8.1.2.1.

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP £s/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in TS 36.133 [4] Section 9.1 are fulfilled.
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per FDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with the measurement period defined in Table 8.14.2.3-2.

Table 8.14.2.3-2: Requirement to measure FDD inter-frequency cells

DRX cycle length (s)	T _{measure_inter} (s) (DRX cycles)	
≤0.08	Non DRX Requirements in TS 36.133 [4] clause 8.1.2.3.1.1 are applicable	
0.08 < DRX- cycle ≤ 2.56	Note (5*N _{freq})	
Note: Time depends upon the DRX cycle in use		

The measurement accuracy for all measured cells shall be as specified in TS 36.133 [4] clause 9.1.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: 2 x TTI DCCH. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify\ inter}$ defined in TS 36.133 [4] clause 8.1.2.3.1.2. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.3.1.2 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period\ Intra}$ provided the timing to that cell has not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.3.2 and A.8.14.2.

8.14.2.4 Test description

8.14.2.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.15.
- 2. The general test parameter settings are set up according to Table 8.14.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.14.2.4.3.

5. There are two E-UTRA carriers and one E-UTRA TDD Cell 1 and one E-UTRA FDD Cell 2 on each carrier specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.14.2.4.1-1: General test parameters for E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Parameter	Unit	Test 1	Test 2	Comment
		Value		
Cell1 PDSCH parameters		DL Reference Measurement		As specified in section A.1.2. Note that UE
		Channel R.0 TDD		may only be allocated at On Duration
Cell1PCFICH/PDCCH/PHIC		DL Reference Me	asurement	As specified in section A.2.2.
H parameters		Channel R.6 TDD)	
Cell2 PDSCH parameters		DL Reference Me	asurement	As specified in section A.1.1. Note that UE
		Channel R.0 FDD		may only be allocated at On Duration
Cell2PCFICH/PDCCH/PHIC		DL Reference Me		As specified in section A.2.1.
H parameters		Channel R.6 FDD)	
E-UTRA RF Channel		1		one TDD carrier frequencies is used.
Number				
E-UTRA RF Channel		2)	one FDD carrier frequencies is used.
Number				
Channel Bandwidth	MHz	1	0	
(BW _{channel})				
Active cell		Ce	II 1	Cell 1 is on RF channel number 1
Neighbour cell		Ce	II 2	Cell 2 is on RF channel number 2
Gap Pattern Id		0		As specified in 3GPP TS 36.133[4] section
				8.1.2.1.
Cell1 Uplink-downlink		1		As specified in 3GPP TS 36.211 section
configuration				4.2 Table 4.2-2
Cell1 Special subframe		6	3	As specified in table 4.2-1 in TS 36.211.
configuration				The same configuration in both cells
A3-Offset	dB	-(3	
Hysteresis	dB	()	
CP length		Nor	mal	
TimeToTrigger	S	()	
Filter coefficient		()	L3 filtering is not used
PRACH configuration		4		As specified in table 5.7.1-3 in TS 36.211
Access Barring Information	-	Not Sent		No additional delays in random access
				procedure.
DRX		ON		DRX related parameters are defined in
				Table 8.14.2.5-2
Time offset between cells		3 r	ns	Asynchronous cells
T1	S	5		
T2	S	5	30	

8.14.2.4.2 Test procedure

The test consists of one active cell and one neighbour cell. In the measurement control information it is indicated to the UE that event-triggered reporting with Event A3 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 2.

In Test 1 when DRX = 40 ms is used, UE needs to be provided at least once every 500 ms with new Timing Advance Command MAC control element to restart the Timer A lignment Timer to keep the UE uplink time a lignment. Furthermore, the UE is allocated with PUSCH resource at every DRX cycle. In Test 2 when DRX = 1280 ms is used, the uplink time a lignment is not maintained and the UE needs to use RACH to obtain uplink allocation for measurement reporting.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Table 8.14.2.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 3. SS shall transmit an RRCConnectionReconfiguration message.

- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.14.2.5-1.
- 6. UE shall transmit a MeasurementReport message triggered by Event A3. If the overall delays measured from the beginning of time period T2 is less than 3882 ms for Test 1 or less than 26882 ms for Test 2 then the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement then the number of failure tests is increased by one.
- 7. After the SS receive the MeasurementReport message in step 6) or when T2 expires, the SS shall trans mit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 8. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.
- 11. Repeat step 1-10 for each sub-test in Table 8.14.2.4.1-1 as appropriate.

8.14.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.14.2.4.3-1: Common Exception messages for E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirements

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-7			
elements contents exceptions	Table H.3.1-9			
	Table H.3.7-1			
	Table H.3.7-2			
	Table H.3.7-3			

Table 8.14.2.4.3-2: RRCConnectionReconfiguration: Additional E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirement

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-8 RRCConnectionReconfiguration						
Information Element	Value/remark	Comment	Condition			
RRCConnectionReconfiguration ::= SEQUENCE {						
rrc-TransactionIdentifier	RRC-					
	TransactionIdentifier-DL					
criticalExtensions CHOICE {						
c1 CHOICE{						
rrcConnectionReconfiguration-r8 SEQUENCE {						
measConfig	MeasConfig -DEFAULT					
radioResourceConfigDedicated	RadioResourceConfigDed					
	icated-HO					
}						
}						
}						
}						

Table 8.14.2.4.3-3: ReportConfigEUTRA-A 3: Additional E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table	4.6.6-6 ReportConfigEUTR	RA-A3	
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A3 ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventid CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)	
reportOnLeave	FALSE		
}			
}			
Hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			
}		•	

Table 8.14.2.4.3-4: SchedulingRequest-Config-DEFAULT: Additional E-UTRAN TDD-FDD interfrequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirements

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-20 SchedulingRequest-Config-DEFAULT					
Information Element	Value/remark	Comment	Condition		
SchedulingRequest-Config-DEFAULT ::= CHOICE {					
setup SEQUENCE {					
sr-PUCCH-ResourceIndex	41	10 MHz channel bandwidth parameter			
sr-ConfigIndex	2				
dsr-TransMax	n4				
}					
}					

Table 8.14.2.4.3-5: *MeasResults*: Additional E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirements

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the	
		measurement id	
		for the reporting	
		being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult		Set according to	
		specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 8.14.2.4.3-6: MeasResultListEUTRA: Additional E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirements

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF MeasResultEUTRA {			
physCellId	PhysCellId		
meas Result SEQUENCE {			
rsrpResult		Set according to specific test INTEGER(097)	
rsrqResult		Set according to specific test INTEGER(034)	
}			
}			

Table 8.14.2.4.3-7: PRA CH-Config-DEFAULT: Additional E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test 1 and 2 requirements

Derivation Path: TS 36.508 [7] clause 7.3.2 Table 7.3.2-1					
Information Element	Value/remark	Comment	Condition		
PRACH-Config-DEFAULT ::= SEQUENCE {					
prach-ConfigIndex	4				
}					

8.14.2.5 Test requirement

Tables 8.14.2.4.1-1, 8.14.2.5-1, 8.14.2.5-2 and 8.14.2.5-3 define the primary level settings including test tolerances for E-UTRANTDD-FDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells test.

Table 8.14.2.5-1: Cell specific test parameters for E-UTRAN TDD-FDD inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells

Parameter	Unit	Cell 1			Cell 2
		T1	T2	T1	T2
E-UTRA RF Channel			1		2
Number					
BW _{channel}	MHz	1	10		10
OCNG Patterns					
defined in D.2.1 (OP.1		OP 1	TDD	OP	.2 FDD
TDD) and in D.1.2		01.1	100		.2100
(OP.2 FDD)					
PBCH_RA	dB				
PBCH_RB	dB				
PSS_RA	dB				
SSS_RA	dB				
PCFICH_RB	dB				
PHICH_RA	dB				
PHICH_RB	dB		0	0	
PDCCH_RA	dB				
PDCCH_RB	dB				
PDSCH_RA	dB				
PDSCH_RB	dB				
OCNG_RA ^{Note 1}	dB				
OCNG_RB ^{Note 1}	dB				
$N_{oc}^{ m Note~2}$	dBm/15 kHz			-98	
RSRP Note 3	dBm/15 kHz	-94	-94	-Infinity	-90.70
$\hat{ extbf{E}}_{ ext{s}}/ extbf{I}_{ ext{ot}}$	dB	4	4	-Infinity	7.30
SCH_RP Note 3	dBm/15 kHz	-94	-94	-Infinity	-90.70
\hat{E}_s/N_{oc}	dB	4	4	-Infinity	7.30
Propagation Condition				TU70	
Note 4: OCNC aboll by		U U £.:U.		_ 1070	

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 8.14.2.5-2: DRX-Configuration to be used in E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Field	Test1	Test2	Comment
Field	Value	Value	
onDurationTimer	psf1	psf1	
drx-InactivityTimer	psf1	psf1	
drx-RetransmissionTimer	psf1	psf1	
longDRX-CycleStartOffset	sf40	sf1280	
shortDRX	disable	disable	
Note: For further information see section	6.3.2 in 3GP	P TS 36.331	[5].

Table 8.14.2.5-3: *TimeAlignmentTimer* and *sr-ConfigIndex*-Configuration to be used in E-UTRAN TDD-FDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Field	Test1 Value	Test2 Value	Comment
TimeAlignmentTimer	sf500	sf500	For further information see section 6.3.2 in 3GPP TS 36.331 [5].
sr-ConfigIndex	2	2	For further information see section 6.3.2 in 3GPP TS 36.331 and section10.1 in 3GPP TS 36.213 [8].

Editor's note: sr-ConfigIndex in table 8.14.2.5 -3 is not inline with core specs, butit will be corrected in RAN4#67.

In Test 1 when DRX cycle length = 40 ms is used, the overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A3 triggered measurement report to Cell 2 on PUSCH.

In Test 2 when DRX cycle length = 1280 ms is used, the overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE starts to send preambles on the PRA CH for Scheduling Request (SR) to obtain allocation to send the measurement report to Cell 2 on PUSCH.

For both tests:

The overall delay measured may be up to $2xTTI_{DCCH}$ higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

NOTE 1: The actual overall delays measured in the test may be up to one DRX cycle higher than the measurement reporting delays above because UE is allowed to delay the initiation of the measurement reporting procedure to the next until the Active Time.

NOTE 2: In order to calculate the rate of correct events the system simulator shall verify that it has received correct Event A3 measurement report.

The overall delay measured when DRX cycle length is 40 ms test requirement is expressed as:

Overall delay measured = measurement reporting delay + TTI insertion uncertainty + DRX cycle length

Measurement reporting delay = $T_{Identify\ Inter}$

$$T_{\text{Identify_Inter}} = T_{\text{Basic_Identify_Inter}} \cdot \frac{480}{T_{\text{Interl}}} \cdot N_{\text{freq}} \quad \textit{ms}$$

Where:

 $T_{Basic_Identify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new FDD inter-frequency cell is defined.

 $T_{Interl} = 60$ ms. It is defined in table 8.1.2.1-1 of TS36.133 [4] clause 8.1.2.1.

 $N_{freq} = 1$. It is defined in TS 36.133 [4] clause 8.1.2.1.1.

TTI insertion uncertainty = 2 ms

DRX cycle length = 40 ms

The overall delays measured when DRX cycle length is 40 ms shall be less than a total of 3882 ms.

The overall delay measured when DRX cycle length is 1280 ms test requirement is expressed as:

Overall delay measured = measurement reporting delay + TTI insertion uncertainty + DRX cycle length

 $Measurement \ reporting \ delay = T_{identify_inter}$

 $T_{identify_inter} = 25600$ ms. When DRX cycle length is 1280 ms then the $T_{identify_inter}$ is 20 x 1280 ms, as defined in Table 8.14.2.3-1.

TTI insertion uncertainty = 2 ms

DRX cycle length = 1280 ms

The overall delays measured when DRX cycle length is 1280 ms shall be less than a total of 26882 ms.

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

8.14.3 E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

8.14.3.1 Test purpose

To verify the requirement for identification of a new CGI of E-UTRA cell with autonomous gaps.

8.14.3.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 9 and forward with support of inter-frequency SI acquisition for HO. Applicability requires support for FGI bit 25.

8.14.3.3 Minimum conformance requirements

No explicit neighbour list is provided to the UE for identifying a new CGI of E-UTRA cell. The UE shall identify and report the CGI when requested by the network for the purpose of 'reportCGI'. The UE may make autonomous gaps in both downlink reception and uplink transmission for receiving MIB and SIB1 message according to section 5.5.3.1 of TS 36.331 [5]. Note that a UE is not required to use autonomous gap if si-RequestForHO is set to false. If autonomous gaps are used for measurement with the purpose of 'reportCGI', regardless of whether DRX is used or not, the UE shall be able to identify a new CGI of E-UTRA cell within:

$$T_{\text{identify GL inter}} = T_{\text{basic identify GL inter}}$$
 ms

Where

 $T_{basic_identify_CGI,inter} = 150 \text{ ms}$. This is the time period used in the above equation where the maximum allowed time for the UE to identify a new CGI of E-UTRA cell is defined.

A cell shall be considered identifiable following conditions are fulfilled:

- RSRP related side conditions given in TS36.133[4] Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.4 for a corresponding Band

The MIB of an E-UTRA cell whose CGI is identified shall be considered decodable by the UE provided the PBCH demodulation requirements are met according to TS 36.331[5].

The requirement for identifying a new CGI of an E-UTRA cell within $T_{basic_identify_CGI,inter}$ is applicable when no DRX is used as well as when all the DRX cycles specified in 3GPP TS 36.331 [5] are used.

Given that continuous DL data allocation and no DRX is used, no measurement gaps are configured, and TDD configuration as in TS36.133[4] Table 8.1.2.3.2.1-1 is used, the UE shall have more than 30 ACK/NACK transmitted during the identification of a new CGI of E-UTRA cell.

The ECGI reporting delay occurs due to the delay uncertainty when inserting the ECGI measurement report to the TTI of the uplink DCCH. The delay uncertainty is twice the TTI of the uplink DCCH. In case DRX is used, the ECGI reporting may be delayed until the next DRX cycle.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.6 and A.8.14.3.

8.14.3.4 Test description

8.14.3.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. The general test parameter settings are set up according to Table 8.14.3.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.14.3.4.3.
- 5. There is one E-UTRA TDD carrier and one E-UTRA FDD carrier and two cells specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.14.3.4.1-1: General test parameters for E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

Parameter	Unit	Value	Comment
Cell1PDSCH parameters		DL Reference Measurement	As specified in section A.1.2
		Channel R.0 TDD	
Cell1 PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2
parameters		Channel R.6 TDD	
Cell2 PDSCH parameters		DL Reference Measurement	As specified in section A.1.1
		Channel R.0 FDD	
Cell2 PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.6 FDD	
Cell1 E-UTRARF channel number		1	One TDD carrier is used
Cell2 E-UTRA RF channel number		2	One FDD carrier is used
Channel Bandwidth (BW _{channel})	MHz	10	
Active cell		Cell 1	Cell 1 is on RF channel number 1.
Neighbour cell		Cell 2	Cell 1 is on RF channel number 2.
CP length		Nomal	
Cell1 special subframe configuration		6	As specified in table 4.2-1 in TS 36.211[9].
Cell1 Uplink-downlink configuration		1	As specified in table 4.2-2 in TS 36.211[9].
Gap Pattern Id		0	As specified in 3GPP TS 36.133 section 8.1.2.1 [5].
A3-Offset	dB	-6	
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
si-RequestForHO		TRUE	As spedified in section 5.5.3.1 in TS 36.331[5].
Time offset between cells	ms	3	Asynchronous cells
T1	S	5	
T2	S	≤10	
T3	S	5	

8.14.3.4.2 Test procedure

The test comprises of one active cell and one neighbour cell. PDCCHs indicating new transmissions should be sent continuously to ensure that the UE would have ACK/NACK sending during identifying a new CGI of E-UTRAN cell. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. At the start of time duration T1, the UE does not have any timing information of cell 2. Gap pattern configuration is configured before T2

begins to enable inter-frequency monitoring. Starting T2, cell 2 becomes detectable and the UE is expected to detect and send a measurement report.

- 1. Ensure the UE is in 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- Set the parameters according to T1 in Table 8.14.3.5-1. Propagation conditions are set according to Annex B clauses B.1.1. T1 starts.
- 3. The SS shall transmit an RRCConnectionReconfiguration with event A3 configured message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.14.3.5-1.
- 6. The UE shall transmit a MeasurementReport message triggered by Event A3.
- 7. The SS shall transmit an RRCConnectionReconfiguration message during period T2, The RRC message shall create a measurement report configuration with purpose *reportCGI* and *si-RequestForHO* set to TRUE.
- 8. The SS shall start T3 timer when the last TTI containing the RRC message implying SI reading is sent to the UE.
- 9. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 10. The UE shall transmit a Measurement Report message containing the cell global identifier of cell 2 within 170 milliseconds from the start of T3. The UE shall be scheduled continuously throughout the test, and from the start of T3 until 170 ms at least 42 ACK/NACK shall be detected as being transmitted by the UE. If the overall delays measured from the beginning of time period T3 is less than 170 ms, and the UE have more than 42 ACK/NACKs transmitted from the start of T3 until 170 ms, then the number of successful tests is increased by one. If the UE fails to report the cell global identifier within the overall delays measured requirement, or the UE have less than 42 ACK/NACKs transmitted from the start of T3 until 170 ms, then the number of failure tests is increased by one.
- 11. After the SS receive the MeasurementReport message in step 10) or when T3 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 2-13 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.14.3.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.14.3.4.3-1: Common Exception messages for E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
·	Table H.3.1-9			

Table 8.14.3.4.3-2: ReportConfigEUTRA-A 3: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step3)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6	.6-6 ReportConfigEUTRA-A3	3	
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A3 ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in	
		dB (-12 * 0.5 dB)	
reportOnLeave	FALSE		
}			
}			
hysteresis	0 (0 dB)	0 is actual value in	
		dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			
}			

Table 8.14.3.4.3-3: *MeasResults*: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}	·		
}			

Table 8.14.3.4.3-4: MeasResultListEUTRA: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step6)

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult		Set according to	
		specific test	
		INTEGER(097)	
rsrqResult		Set according to	
		specific test	
		INTEGER(034)	
}			
}			

Table 8.14.3.4.3-5: ReportConfigEUTRA-PERIODICAL: Additional E-UTRAN TDD - FDD Interfrequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {			
triggerType CHOICE {			
periodical SEQUENCE {			
purpose	reportCGI		
}			
}			
reportAmount	1		
si-RequestForHO-r9	setup		
}			

Table 8.14.3.4.3-6: MeasGapConfig- Additional E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Derivation Path: 36.331, clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasGapConfig ::= CHOICE {			
release	NULL		
}			

Table 8.14.3.4.3-7: MeasResultListEUTRA: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step10)

Derivation Path: TS 36.331 [5] clause 6.3.5	Value/remark	Comment	Condition
	value/reiliaik	Comment	Condition
Meas ResultListEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
cgi-Info SEQUENCE{			
cellGloballd SEQUENCE{			
plmn-ldentity	plmn-Identity		
cellIdentity	cellIdentity of cell 2		
}			
trackingAreaCode			
plmn-IdentityList			
}			
}			

Table 8.14.3.4.3-8: MeasObjectEUTRA-GENERIC: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-2 MeasObjectEUTRA-GENERIC					
Information Element	Value/remark	Comment	Condition		
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE					
{					
cellForWhichToReportCGI	Physical Cell ID of Cell 2		Cell 1		
}					

Table 8.14.3.4.3-9: MeasConfig-DEFAULT: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step3)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:					
Information Element	Value/remark	Comment	Condition		
MeasConfig-DEFAULT ::= SEQUENCE {					
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0		
}					

Table 8.14.3.4.3-10: MeasConfig-DEFAULT: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 Meas Config-DEFAULT:					
Information Element	Value/remark	Comment	Condition		
MeasConfig-DEFAULT ::= SEQUENCE {					
reportConfigToAddModList SEQUENCE (SIZE	1 entry				
(1maxReportConfigId))OF SEQUENCE {					
reportConfigId	idReportConfig-P				
reportConfig	ReportConfigEUTRA-				
	PERIODICAL				
}					
measIdToAddModList SEQUENCE (SIZE	1 entry				
(1maxMeasId)) of SEQUENCE {					
measld	2				
meas ObjectId	ldMeasObject-f2				
reportConfigld	ldReportConfig-P				
}					
}					

Table 8.14.3.4.3-11: MeasResults: Additional E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step10)

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	2	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

8.14.3.5 Test requirement

Tables 8.14.3.4.1-1 and 8.14.3.5-1 define the primary level settings including test tolerances for E-UTRANTDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test.

Table 8.14.3.5-1: Cell Specific Test requirement Parameters for E-UTRAN TDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

Parameter	Unit		Cell 1			Cell 2		
		T1	T2	T3	T1	T2	T3	
E-UTRA RF Channel			1			2	•	
Number								
BW _{channel}	MHz		10			10		
OCNG Patterns defined in		OP.1	OP.1	OP.1	OP.2	OP.2	OP.2	
D.2.1 (OP.1 TDD) and in		TDD	TDD	TDD	FDD	FDD	FDD	
D.1.2 (OP.2 FDD)								
PBCH_RA	dB							
PBCH_RB	dB							
PSS_RA	dB							
SSS_RA	dB							
PCFICH_RB	dB							
PHICH_RA	dB							
PHICH_RB	dB		0			0		
PDCCH_RA	dB							
PDCCH_RB	dB	┦						
PDSCH_RA	dB							
PDSCH_RB	dB							
OCNG_RA ^{NOTE 1}	dB							
OCNG_RB ^{NOTE T}	dB							
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4	4	4	-Infinity	7	7	
N_{oc} Note 2	dBm/15 KHz			-(98			
\hat{E}_s/N_{oc}	dB	4	4	4	-Infinity	7	7	
RSRP Note 3	dBm/15 KHz	-94	-94	-94	-Infinity	-91	-91	
SCH_RP Notes	dBm/15 KHz	-94	-94	-94	-Infinity	-91	-91	
Propagation Condition		AWGN						
Note 1: OCNG shall be us	sed such that both cells are fully allocated and a constant total transmitted power spectral and for all OFDM symbols							

density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{ac}\,$ to be fulfilled.

RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are Note 3: not settable parameters themselves

The UE shall transmit a measurement report containing the cell global identifier of cell 2 within 170 milliseconds from the start of T3.

The overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Test requirement = RRC Procedure delay + $T_{identify GI, inter}$ + TTI insertion uncertainty

RRC procedure delay=15ms

$$T_{\text{identify_GI, inter}} = T_{\text{basic_identify_GI, inter}} \quad ms$$

 $T_{basic_identify_CGI,intra} = 150 \text{ ms}$

TTI insertion uncertainty = 2 ms

The overall delays measured is 167 ms, allow 170 ms. The UE shall be scheduled continuously throughout the test, and from the start of T3 until 170 ms at least 42 ACK/NACK shall be detected as being transmitted by the UE.

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

NOTE: The overall 42 A CK/NACK number is caused by two parts. Firstly, at least 30 ACK/NACK shall be sent during identifying the cell global identifier of cell 2 according to the requirement in TS 36.133 [4] Section 8.1.2.3.7.1. Secondly, given that continuous DL data allocation, and the measurement gaps have been deconfigured before the start of T3, additional 12 A CK/NACK shall be sent from the start of T3 until 170 ms excludes 150 ms for identifying the cell global identifier of cell 2.

8.15 E-UTRAN FDD - TDD Inter-frequency Measurements

8.15.1 E-UTRAN FDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

8.15.1.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions in asynchronous cells within the E-UTRA FDD - TDD inter-frequency cell search requirements. This test will verify the FDD-TDD inter-frequency cell search requirements in section 8.1.2.3.4.

8.15.1.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bit 25.

8.15.1.3 Minimum conformance requirements

When measurement gaps are scheduled the UE shall be able to identify a new TDD inter-frequency within $T_{Identify_Inter}$ according to the following expression:

$$T_{\text{Identify_Inter}} = T_{\text{Basic_Identify_Inter}} \cdot \frac{480}{T_{\text{Interl}}} \cdot N_{freq} \quad ms$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new TDD inter-frequency cell is defined.

 T_{interl} is defined in TS 36.133 [4] section 8.1.2.1

N_{freq} is defined in TS 36.133 [4] section 8.1.2.1.1.

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP Ês/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in TS 36.133 [4] Section 9.1 are fulfilled.
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

When measurement gaps are scheduled for TDD inter frequency measurements the UE physical layer shall be capable of reporting measurements to higher layers with measurement accuracy as specified in TS 36.133 sub-clause 9.1.3 with measurement period (T_{Measurement Period_TDD_Inter}) given by table 8.4.4.1.3-1.

Note 2:

Configuration	Measurement bandwidth	Number of UL/DL sub-frames per half frame (5 ms)		Dwl	PTS	T _{Measurement_Period_TDD_I} nter [ms]
	[RB]	DL	UL	Nomal CP	Extended CP	
0	6	2	2	$19760 \cdot T_{\rm s}$	$20480 \cdot T_{\rm s}$	480 x N _{freq}
1 (Note 1)	50	2	2	$19760 \cdot T_{\rm s}$	$20480 \cdot T_{\rm s}$	240 x N _{freq}
Note 1: This configuration is optional.						

Table 8.15.1.3-1: T_{Measurement_Period_TDD_Inter} for different configurations

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per TDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T _{Identify_Inter} defined in TS 36.133 [4] clause 8.1.2.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.2.1.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period_Intra}$ provided the timing to that cell has not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.4 and A.8.15.1.

8.15.1.4 Test description

8.15.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

 $T_{\rm s}$ is defined in 3GPP TS 36.211 [9].

with the measurement period $T_{Measurement_Period_TDD_Inter.}$

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.15.
- 2. The general test parameter settings are set up according to Table 8.15.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.15.1.4.3.
- 5. There are two E-UTRA carriers and one E-UTRA FDD Cell 1 and one E-UTRA TDD Cell 2 on each carrier specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.15.1.4.1-1: General test parameters for E-UTRAN FDD-TDD inter frequency event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
		DL Reference Measurement	
Cell 1 PDSCH parameters		Channel R.0 FDD	As specified in section A.1.1
		DL Reference Measurement	
Cell 1 PCFICH/PDCCH/PHICH		Channel R.6 FDD	As specified in section A.2.1
parameters			
		DL Reference Measurement	
Cell 2 PDSCH parameters		Channel R.0 TDD	As specified in section A.1.2
		DL Reference Measurement	
Cell 2 PCFICH/PDCCH/PHICH		Channel R.6 TDD	As specified in section A.2.2
parameters			
Gap Pattern Id		1	As specified in TS 36.133 section 8.1.2.1.
Cell2 Special subframe		6	As specified in table 4.2-1 in TS 36.211.
configuration			Applicable to Cell 2.
Cell2 Uplink-downlink		1	As specified in TS 36.211 section 4.2
configuration			Table 4.2-2. Applicable to Cell 2.
CP length		Nomal	
Cell 1 E-UTRA FDD RF		1	One TDD carrier frequency is used.
Channel Number		'	One 122 carrier frequency is asea.
Cell 2 E-UTRATDD RF		2	One FDD carrier frequency is used.
Channel Number		_	one i 22 camer nequency ie accar
Channel Bandwidth (BW _{channel})	MHz	10	
Active cell		Cell 1	Cell 1 is on RF channel number 1
Neighbour cell		Cell 2	Cell 2 is on RF channel number 2
A3-Offset	dB	-6	
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
Time offset between cells		3 ms	Asynchronous cells
T1	S	5	
T2	S	10	

8.15.1.4.2 Test procedure

The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of cell 2. Gap pattern configuration #1is configured before T2 begins to enable inter-frequency monitoring.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Table 8.15.1.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ When \ T1 \ expires, the \ SS \ shall \ switch \ the \ power \ setting \ from \ T1 \ to \ T2 \ as \ specified \ in \ Table \ 8.15.1.5-1.$
- 6. UE shall transmit a MeasurementReport message triggered by Event A3. If the measurement reporting delay from the beginning of time period T2 is less than 7682 ms the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.
- 7. After the SS receive the MeasurementReport message in step 6) or when T2 expires, the SS shall transmit an RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 8. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.

- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.15.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.15.1.4.3-1: Common Exception messages for Additional E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H3.1-1			
elements contents exceptions	Table H3.1-3			
·	Table H.3.1-7			

Table 8.15.1.4.3-2: ReportConfigEUTRA-A 3: Additional E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6	.6-6 ReportConfigEUTRA-	A3	
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventld CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in	
		dB (-12 * 0.5 dB)	
}			
}			
Hysteresis	0 (0 dB)	0 is actual value in	
		dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			
}			

Table 8.15.1.4.3-3: *MeasResults*: Additional E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 8.15.1.4.3-4: MeasResultListEUTRA: Additional E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
Meas ResultListEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF Meas ResultEUTRA {			
Meas ResultEUTRA ::= SEQUENCE {			
physCellId	PhysicalCellIdentity	Cell 2	
meas Result SEQUENCE {			
rsrpResult		Set according to specific test INTEGER(097)	
rsrqResult		Set according to specific test INTEGER(034)	
}			
}			

8.15.1.5 Test requirement

Tables 8.15.1.4.1-1 and 8.15.1.5-1 define the primary level settings including test tolerances for event triggered reporting under fading propagation conditions in asynchronous FDD-TDD inter frequency cells test.

Table 8.15.1.5-1: Cell specific test parameters for E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells

Parameter	Unit	Се	Cell 1		Cell 2
		T1	T2	T1	T2
E-UTRARF Channel		,			2
Number					
BWchannel	MHz	1	0		10
OCNG Pattern defined					
in D.1.1 (OP.1 FDD)		OP.1	FDD	OP	.2 TDD
and in D.2.2 (OP.2		0	. 55	0.	100
TDD)					
PBCH_RA	dB				
PBCH_RB	dB				
PSS_RA	dB				
SSS_RA	dB				
PCFICH_RB	dB				
PHICH_RA	dB				
PHICH_RB	dB	()		0
PDCCH_RA	dB				
PDCCH_RB	dB				
PDSCH_RA	dB				
PDSCH_RB	dB				
OCNG_RA ^{NOTE 1}	dB				
OCNG_RB ^{NOLE 1}	dB				

$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4.00	4.00	-Infinity	7.30
N_{oc} Note 3	dBm/15 kHz			-98	
RSRP Note 4	dBm/15 kHz	-94.00	-94.00	-Infinity	-90.70
SCH_RP Note 4	dBm/15 kHz	-94.00	-94.00	-infinity	-90.70
\hat{E}_s/N_{oc}	dB	4.00	4.00	-Infinity	7.30
Propagation Condition		ETU70			

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE priori to the start of time period T2.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A3 triggered measurement report, with a measurement reporting delay less than 7682 ms from the beginning of time period T2.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A3 triggered measurement report to Cell 2.

The overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = 7680 ms

TTI insertion uncertainty = $TTI_{DCCH} = 1 \text{ ms}$; $2xTTI_{DCCH} = 2 \text{ ms}$

The overall delays measured shall be less than a total of 7682 ms in this test case (note: a total of 7680 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

8.15.2 E-UTRAN FDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

8.15.2.1 Test purpose

To verify the UE's ability to make a correct reporting of an event in DRX under fading propagation conditions in asynchronous cells within the E-UTRA FDD-TDD inter-frequency cell search requirements.

8.15.2.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bits 5 and 25.

8.15.2.3 Minimum conformance requirements

When DRX is in use the UE shall be able to identify a new detectable E-UTRAN TDD inter frequency cell within $T_{identify_inter}$ as shown in table 8.15.2.3-1.

Table 8.15.2.3-1: Requirement to identify a newly detectable TDD inter frequency cell

DRX cycle	T _{identif y_inter} (s)	(DRX cycles)			
length (s)	Gap period =	Gap period =			
	40 ms	80 ms			
≤0.16	Non DRX	Non DRX			
	Requirements	Requirements			
	in TS 36.133	in TS 36.133			
	[4] clause	[4] clause			
	8.1.2.3.4.1	8.1.2.3.4.1			
	are applicable	are applicable			
0.256	5.12*Nfreq	7.68*Nfreq			
	(20*Nfreq)	(30*Nfreq)			
0.32	6.4*Nfreq	7.68*Nfreq			
	(20*Nfreq)	(24*Nfreq)			
0.32 <drx-< th=""><th>Note</th><th>Note</th></drx-<>	Note	Note			
cycle≤2.56	(20*Nfreq)	(20*Nfreq)			
Note: Time depends upon the DRX cycle in					
us	use				

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP £s/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in TS 36.133 [4] Section 9.1 are fulfilled.
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per TDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with the measurement period defined in Table 8.15.2.3-2.

Table 8.15.2.3-2: Requirement to measure TDD inter frequency cells

DRX cycle length (s)	T _{measure_inter} (s) (DRX cycles)		
≤0.84	Non DRX Requirements in TS 36.133 [4] clause 8.1.2.3.4.1 are applicable		
0.08 <drx- cycle≤2.56</drx- 	Note (5*N _{freq})		
Note: Time depends upon the DRX cycle in use			

The measurement accuracy for all measured cells shall be as specified in TS 36.133 [4] sub-clause 9.1.

Reported measurements contained in periodically triggered measurement reports shall meet the requirements in TS 36.133 [4] section 9.

Reported measurements contained in event triggered periodic measurement reports shall meet the requirements in TS 36.133 [4] section 9.

The first report in event triggered periodic measurement reporting shall meet the requirements specified in TS 36.133 [4] section 8.1.2.3.2.2.1.3 Event Triggered Reporting.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] section 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{\text{Identify_Inter}}$ defined in TS 36.133 [4] Section 8.1.2.3.2.2 When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.2.1.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period\ Intra}$ provided the timing to that cell has not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.4.2 and A.8.15.2.

8.15.2.4 Test description

8.15.2.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.15.
- 2. The general test parameter settings are set up according to Table 8.15.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.15.2.4.3.
- 5. There are two E-UTRA carriers and one E-UTRA FDD Cell 1 and one E-UTRA TDD Cell 2 on each carrier specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.15.2.4.1-1: General test parameters for E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Cell 1 PDSCH parameters		Va	110		
Cell 1 PDSCH parameters		Value			
		DL Reference Measurement Channel R.0 FDD		As specified in section A.1.1 Note that UE may only be allocated at On Duration	
Cell 1		DL Reference Me		As specified in section A.2.1.	
PCFICH/PDCCH/PHICH		Channel R.6 FDD			
parameters					
Cell 2 PDSCH parameters		DL Reference Measurement		As specified in section A.1.2 Note that UE	
		Channel R.0 TDD		may only be allocated at On Duration	
Cell 2		DL Reference Me	asurement	As specified in section A.2.2	
PCFICH/PDCCH/PHICH		Channel R.6 TDD)		
parameters					
Cell 1 E-UTRA FDD RF		1		One FDD carrier frequency is used.	
Channel Number					
Cell 2 E-UTRA TDD RF		2	=	One TDD carrier frequency is used.	
Channel Number					
	MHz	1	0		
(BW _{channel})					
Active cell		Ce		Cell 1 is on RF channel number 1	
Neighbour cell		Ce	II 2	Cell 2 is on RF channel number 2	
Gap Pattern Id		C		As specified in 3GPP TS 36.133 [4] section 8.1.2.1.	
A3-Offset	dB	-(3		
	dB	C			
CP length		Non	mal		
TimeToTrigger	S	C			
Filter coefficient		C		L3 filtering is not used	
Cell 2 Special subframe		6	;	As specified in table 4.2-1 in TS 36.211	
configuration				·	
Cell 2 Uplink-downlink		1		As specified in table 4.2-2 in TS 36.211	
configuration					
E-UTRA TDD PR ACH		4		As specified in table 5.7.1-2 in TS 36.211	
configuration					
E-UTRATDD Access	-	Not 9	Sent	No additional delays in random access	
Barring Information				procedure.	
DRX		0	N	DRX related parameters are defined in Table 8.15.2.5-2	
Time offset between cells	ms	3	}	Asynchronous cells	
T1	S	5	i	-	
T2	S	5	30		

8.15.2.4.2 Test procedure

The test consists of one active cell and one neighbour cell. In the measurement control information it is indicated to the UE that event-triggered reporting with Event A3 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 2.

In Test 1 UE needs to be provided at least once every 500ms with new Timing Advance Command MAC control element to restart the Time alignment timer to keep UE uplink time alignment. Furthermore, the UE is allocated with PUSCH resource at every DRX cycle. In Test 2 the uplink time alignment is not maintained and UE needs to use RACH to obtain UL allocation for measurement reporting.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Table 8.15.2.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 3. The SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.15.2.5-1.

- 6. The UE shall transmit a MeasurementReport message triggered by Event A3. If the overall delays measured from the beginning of time period T2 is less than 3882 ms for Test 1 and 26882 ms for Test 2 then the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement then the number of failure tests is increased by one.
- 7. After the SS receives the MeasurementReport message in step 6 or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 8. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.
- 11. Repeat step 1-10 for each sub-test in Table 8.15.2.4.1-1 as appropriate.

8.15.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.15.2.4.3-1: Common Exception messages for Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-7		
elements contents exceptions	Table H.3.1-9		
	Table H.3.7-1		
	Table H.3.7-2		
	Table H.3.7-3		

Table 8.15.2.4.3-2: RRCConnectionReconfiguration: Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-8 RRCConnectionReconfiguration				
Information Element	Value/remark	Comment	Condition	
RRCConnectionReconfiguration ::= SEQUENCE {				
rrc-TransactionIdentifier	RRC-			
	TransactionIdentifier-DL			
criticalExtensions CHOICE {				
c1 CHOICE{				
rrcConnectionReconfiguration-r8 SEQUENCE {				
measConfig	MeasConfig-DEFAULT			
radioResourceConfigDedicated	RadioResourceConfigDe			
	dicated-HO			
}				
}				
}				
}				

Table 8.15.2.4.3-3: ReportConfigEUTRA-A 3: Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table	4.6.6-6 ReportConfigEUTRA	-A3	
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A3 ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)	
reportOnLeave	FALSE		
}			
}			
hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			
}	<u> </u>		

Table 8.15.2.4.3-4: SchedulingRequest-Config-DEFAULT: Additional E-UTRAN FDD-TDD interfrequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-20: SchedulingRequest-Config-DEFAULT				
Information Element	Value/remark	Comment	Condition	
SchedulingRequest-Config-DEFAULT ::= CHOICE {				
setup SEQUENCE {				
sr-PUCCH-ResourœIndex	41	Channel- bandwidth- dependent parameter		
sr-ConfigIndex	0			
dsr-TransMax	n4			
}				
}				

Table 8.15.2.4.3-5: *MeasResults:* Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult	INTEGER(097)	Set according to specific test	
rsrqResult	INTEGER(034)	Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 8.15.2.4.3-6: MeasResultListEUTRA: Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultsLlstEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId	INTEGER (0503)	
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
}			

Table 8.15.2.4.3-7: PRA CH-Config-DEFAULT: Additional E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions test requirement

Derivation Path: TS 36.508 [7] clause 7.3.2 Table 7.3	3.2-1		
Information Element	Value/remark	Comment	Condition
PRACH-Config-DEFAULT ::= SEQUENCE {			
prach-ConfigIndex	4		
}			

8.15.2.5 Test requirement

Tables 8.15.2.5-1, 8.15.2.5-2 and 8.15.2.5-3 define the primary level settings including test tolerances for E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells test.

Table 8.15.2.5-1: Cell specific test parameters for E-UTRAN FDD-TDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells

Parameter	Unit	Cell 1			Cell 2		
		T1	T2	T1	T2		
E-UTRARF Channel		,	1		1 2		2
Number							
BWchannel	MHz	1	0	10			
OCNG Pattern defined							
in D.1.1 (OP.1 FDD)		OP 1	FDD	OP.2 TDD			
and in D.2.2 (OP.2 TDD)		01.1	OP.1 FDD		.2 100		
PBCH_RA	dB						
PBCH_RB	dB						
PSS_RA	dB	1					
SSS_RA	dB						
PCFICH_RB	dB						
PHICH_RA	dB						
PHICH_RB	dB	[0		0		
PDCCH_RA	dB						
PDCCH_RB	dB	1					
PDSCH_RA	dB						
PDSCH_RB	dB						
OCNG_RAINOTE T	dB						
OCNG_RB ^{NOIE 1}	dB						

$\hat{\mathrm{E}}_{_{\mathrm{s}}}/\mathrm{I}_{_{\mathrm{ot}}}$	dB	4.00	4.00	-Infinity	7.30
$N_{oc}^{ m Note~3}$	dBm/15 kHz	-98			
RSRP Note 4	dBm/15 kHz	-94.00	-94.00	-Infinity	-90.70
SCH_RP Note 4	dBm/15 kHz	-94.00	-94.00	-infinity	-90.70
\hat{E}_s/N_{oc}	dB	4.00	4.00	-Infinity	7.30
Propagation Condition		ETU70			

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE priori to the start of time period T2.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over

subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 8.15.2.5-2: DRX-Configuration to be used in E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Field	Test1 Value	Test2 Value	Comment
onDurationTimer	psf1	psf1	
drx-InactivityTimer	psf1	psf1	
drx-RetransmissionTimer	psf1	psf1	
longDRX-CycleStartOffset	sf40	sf1280	
shortDRX	disable	disable	

Table 8.15.2.5-3: *TimeAlignmentTimer* and *sr-ConfigIndex*-Configuration to be used in E-UTRAN FDD-TDD inter-frequency event triggered reporting when DRX is used in fading propagation conditions

Field	Test1 Value	Test2 Value	Comment
TimeAlignmentTimer	sf500	sf500	For further information see section 6.3.2 in 3GPP TS 36.331 [5].
sr-ConfigIndex	0	0	For further information see section 6.3.2 in 3GPP TS 36.331 and 10.1 in 3GPP TS 36.213 [8].

Editor's note: sr-ConfigIndex in table 8.15.2.5 -3 is not inline with core specs, but it will be corrected in RAN4#67.

In Test1 when DRX cycle length = 40 ms is used, the overall delay measured is defined as the time from the beginning of time period T2, to the moment when the UE send one Event A3 triggered measurement report on PUSCH.

In Test 2 when DRX cycle length = 1280 ms is used, the overall delay measured is defined as the time from the beginning of time period T2, to the moment the UE starts to send preambles on the PRACH for Scheduling Request (SR) to obtain allocation to send the measurement report to Cell 2 on PUSCH.TTI insertion uncertainty = 2 ms.

For both tests:

The overall delay measured may be up to $2xTTI_{DCCH}$ higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

NOTE 1: The actual overall delays measured in the test may be up to one DRX cycle higher than the measurement reporting delays above because UE is allowed to delay the initiation of the measurement reporting procedure to the next until the Active Time.

NOTE 2: In order to calculate the rate of correct events the system simulator shall verify that it has received correct Event A3 measurement report.

The overall delay measured when DRX cycle length is 40 ms test requirement is expressed as:

Overall delay measured = measurement reporting delay + TTI insertion uncertainty + DRX cycle length

Measurement reporting delay = $T_{Identify_Inter}$

$$T_{\rm Identify_Inter} = T_{\rm Basic_Identify_Inter} \cdot \frac{480}{T_{\rm Interl}} \cdot N_{\it freq} \quad \it ms$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new FDD inter-frequency cell is defined.

 $T_{Interl} = 60$ ms. It is defined in table 8.1.2.1-1 of TS36.133 [4] clause 8.1.2.1.

 $N_{freq} = 1$. It is defined in TS 36.133 [4] clause 8.1.2.1.1.

TTI insertion uncertainty = 2 ms

DRX cycle length = 40 ms

The overall delay measured when DRX cycle length is 40 ms shall be less than a total of 3882 ms.

The overall delay measured when DRX cycle length is 1280 ms test requirement is expressed as:

Overall delay measured = measurement reporting delay + TTI insertion uncertainty + DRX cycle length

Measurement reporting delay = $T_{identify inter}$

 $T_{identify_inter} = 25600$ ms. When DRX cycle length is 1280 ms then the $T_{identify_inter}$ is 20 x 1280 ms, as defined in Table 8.15.2.3-1.

TTI insertion uncertainty = 2 ms

DRX cycle length = 1280 ms

The overall delay measured when DRX cycle length is 1280 ms shall be less than a total of 26882 ms.

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

8.15.3 E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

8.15.3.1 Test purpose

To verify the requirement for identification of a new CGI of E-UTRA cell with autonomous gaps.

8.15.3.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 9 and forward with support of inter-frequency SI acquisition for HO. Applicability requires support for FGI bit 25.

8.15.3.3 Minimum conformance requirements

No explicit neighbour list is provided to the UE for identifying a new CGI of E-UTRA cell. The UE shall identify and report the CGI when requested by the network for the purpose of 'reportCGI'. The UE may make autonomous gaps in both downlink reception and uplink transmission for receiving MIB and SIB1 message according to section 5.5.3.1 of TS 36.331 [5]. Note that a UE is not required to use autonomous gap if si-RequestForHO is set to false. If autonomous gaps are used for measurement with the purpose of 'reportCGI', regardless of whether DRX is used or not, the UE shall be able to identify a new CGI of E-UTRA cell within:

$$T_{\text{identify GI, inter}} = T_{\text{basic identify GI, inter}}$$
 ms

Where

 $T_{basic_identify_CGI,inter} = 150 \text{ ms.}$ This is the time period used in the above equation where the maximum allowed time for the UE to identify a new CGI of E-UTRA cell is defined.

A cell shall be considered identifiable following conditions are fulfilled:

- RSRP related side conditions given in TS 36.133[4] Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP and SCH £s/Iot according to Annex I.2.4 for a corresponding Band.

The MIB of an E-UTRA cell whose CGI is identified shall be considered decodable by the UE provided the PBCH demodulation requirements are met according to TS 36.331[5].

The requirement for identifying a new CGI of an E-UTRA cell within $T_{basic_identify_CGI_inter}$ is applicable when no DRX is used as well as when all the DRX cycles specified in 3GPP TS 36.331 [5] are used.

Given that continuous DL data allocation and no DRX is used, and no measurement gaps are configured, the UE shall have more than 60 A CK/NACKs transmitted during the identification of a new CGI of E-UTRA cell.

The ECGI reporting delay occurs due to the delay uncertainty when inserting the ECGI measurement report to the TTI of the uplink DCCH. The delay uncertainty is twice the TTI of the uplink DCCH. In case DRX is used, the ECGI reporting may be delayed until the next DRX cycle.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.8 and A.8.15.3.

8.15.3.4 Test description

8.15.3.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. The general test parameter settings are set up according to Table 8.15.3.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.15.3.4.3.
- 5. There is one E-UTRA FDD carrier and one E-UTRA TDD carrier and two cells specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.15.3.4.1-1: General test parameters for E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

Parameter	Unit	Value	Comment
Cell1 PDSCH parameters		DL Reference Measurement Channel R.3 FDD	As specified in section A.1.1
Cell1 PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.6 FDD	
Cell2 PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2
parameters		Channel R.6 TDD	
E-UTRARF channel number		1, 2	One FDD and one TDD carrier
			frequency are used.
Channel Bandwidth (BW _{channel})	MHz	10	
Active cell		Cell 1	Cell 1 is on RF channel number 1.
Neighbour cell		Cell 2	Cell 1 is on RF channel number 2.
CP length		Nomal	
Cell 2 Special subframe configuration		6	As spedified in table 4.2-1 in TS 36.211[9].
Cell 2 Uplink-downlink configuration		1	As spedified in table 4.2-2 in TS 36.211[9].
Gap Pattern Id		0	As spedified in 3GPP TS 36.133 [4] section 8.1.2.1.
A3-Offset	dB	-6	
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
si-RequestForHO		TRUE	As specified in section 5.5.3.1 in
			TS 36.331[5].
Time offset between cells	ms	3	Asynchronous cells
T1	S	5	
T2	S	≤10	
T3	S	5	

8.15.3.4.2 Test procedure

The test comprises of one active cell and one neighbour cell. PDCCHs indicating new transmissions should be sent continuously to ensure that the UE would have ACK/NACK sending during identifying a new CGI of E-UTRAN cell. The test consists of three successive time periods, with time durations of T1, T2 and T3 respectively. At the start of time duration T1, the UE does not have any timing information of cell 2. Gap pattern configuration is configured before T2 begins to enable inter-frequency monitoring. Starting T2, cell 2 becomes detectable and the UE is expected to detect and send a measurement report.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Table 8.15.3.5-1. Propagation conditions are set according to Annex B clauses B.1.1. T1 starts.
- 3. The SS shall transmit an RRCConnectionReconfiguration with event A3 configured message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.15.3.5-1.
- 6. The UE shall transmit a MeasurementReport message triggered by Event A3.
- 7. The SS shall transmit an RRCConnectionReconfiguration message during period T2, The RRC message shall create a measurement report configuration with purpose *reportCGI* and *si-RequestForHO* set to TRUE.
- 8. The SS shall start T3 timer when the last TTI containing the RRC message implying SI reading is sent to the UE.
- 9. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 10. The UE shall transmit a Measurement Report message containing the cell global identifier of cell 2 within 170 milliseconds from the start of T3. The UE shall be scheduled continuously throughout the test, and from the start

of T3 until 170 ms at least 80 ACK/NACK shall be detected as being transmitted by the UE. If the overall delays measured from the beginning of time period T3 is less than 170 ms, and the UE have more than 80 ACK/NACKs transmitted from the start of T3 until 170 ms, then the number of successful tests is increased by one. If the UE fails to report the cell global identifier within the overall delays measured requirement, or the UE have less than 80 ACK/NACKs transmitted from the start of T3 until 170 ms, then the number of failure tests is increased by one.

- 11. After the SS receives the MeasurementReport message in step 10) or when T3 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 2-13 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.15.3.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.15.3.4.3-1: Common Exception messages for E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Default Message Contents		
Common contents of system information		
blocks exceptions		
Default RRC messages and information	Table H.3.1-1	
	Table H.3.1-7	
·	Table H.3.1-9	

Table 8.15.3.4.3-2: ReportConfigEUTRA-A 3: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step3)

Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A3 ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventld CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)	
reportOnLeave	FALSE		
}			
}			
hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			

Table 8.15.3.4.3-3: *MeasResults*: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5 Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {	Valdo/romank	Commone	Containon
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			

Table 8.15.3.4.3-4: MeasResultListEUTRA: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step6)

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
Meas ResultListEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
meas Result SEQUENCE {			
rsrpResult		Set according to	
		specific test	
		INTEGER(097)	
rsrqResult		Set according to	
		specific test	
		INTEGER(034)	
}			
}			

Table 8.15.3.4.3-5: ReportConfigEUTRA-PERIODICAL: Additional E-UTRAN FDD - TDD Interfrequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {			
triggerType CHOICE {			
periodical SEQUENCE {			
purpose	reportCGI		
}			
}			
reportAmount	1		
si-RequestForHO-r9	setup		

Table 8.15.3.4.3-6: MeasGapConfig- Additional E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Derivation Path: 36.331, clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasGapConfig ::= CHOICE {			
Release	NULL		
}			

Table 8.15.3.4.3-7: MeasResultListEUTRA: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step10)

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
cgi-Info SEQUENCE{			
cellGloballd SEQUENCE{			
plmn-ldentity	plmn-Identity		
cellIdentity	cellIdentity		
}			
trackingAreaCode			
plmn-ldentityList			
}			
}			

Table 8.15.3.4.3-8: MeasObjectEUTRA-GENERIC: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Value/remark	Comment	Condition
'01'B (No MBSFN		
subframes are present in		
all neighbour cells)		
Physical Cell ID of Cell 2		Cell 1
	'01'B (No MBSFN subframes are present in all neighbour cells)	'01'B (No MBSFN subframes are present in all neighbour cells)

Table 8.15.3.4.3-9: SystemInformationBlockType2: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Derivation Path: TS 36.508 [7] clause 7.2.1.3, Table 7.2.1.3-1 SystemInformationBlockType2 exceptions			
Information Element	Value/remark	Comment	Condition
SystemInformationBlockType2 ::= SEQUENCE {			
mbsfn-SubframeConfig	Not present		Cell 1
}			

Table 8.15.3.4.3-10: SystemInformationBlockType5: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement

Derivation Path: TS 36.508 [7] clause 7.2.1.3, Table 7.2.1.3-3 SystemInformationBlockType5 exceptions				
Information Element	Value/remark	Comment	Condition	
SystemInformationBlockType5 ::= SEQUENCE {				
neighCellConfig[n]	01'B (No MBSFN subframes are present in all neighbour cells)			
}				

Table 8.15.3.4.3-11: MeasConfig-DEFAULT: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step3)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:				
Information Element	Value/remark	Comment	Condition	
MeasConfig-DEFAULT ::= SEQUENCE {				
measGapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0	
}				

Table 8.15.3.4.3-12: MeasConfig-DEFAULT: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step7)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.	6.6-1 MeasConfig-DEFAULT:		
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId))OF SEQUENCE {			
reportConfigId	idReportConfig-P		
reportConfig	ReportConfigEUTRA- PERIODICAL		
}			
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {			
measld	2		
meas ObjectId	ldMeasObject-f2		
reportConfigld	IdReportConfig-P		
}			
}			

Table 8.15.3.4.3-13: MeasResults: Additional E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test requirement (step10)

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	2	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

8.15.3.5 Test requirement

Tables 8.15.3.4.1-1 and 8.15.3.5-1 define the primary level settings including test tolerances for E-UTRANFDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps test.

Table 8.15.3.5-1: Cell Specific Test requirement Parameters for E-UTRAN FDD - TDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps

Parameter	Unit		Cell 1			Cell 2	
		T1	T2	T3	T1	T2	T3
E-UTRA RF Channel			1			2	
Number							
BWchannel	MHz		10			10	
OCNG Patterns defined in		OP.10	OP.10	OP.10	OP.2	OP.2	OP.2
D.1.10 (OP.10 FDD) and in		FDD	FDD	FDD	TDD	TDD	TDD
D.2.2 (OP.2 TDD)							
PBCH_RA	dB						
PBCH_RB	dB						
PSS_RA	dB						
SSS_RA	dB						
PCFICH_RB	dB						
PHICH_RA	dB						
PHICH_RB	dB		0			0	
PDCCH_RA	dB						
PDCCH_RB	dB						
PDSCH_RA	dB						
PDSCH_RB	dB						
OCNG_RA ^{NOTE 1}	dB	1					
OCNG_RB ^{INOLE I}	dB						

$\hat{\mathbf{E}}_{\mathrm{s}}/\mathbf{I}_{\mathrm{ot}}$	dB	4	4	4	-Infinity	7	7
$N_{oc}^{ m Note~2}$	dBm/15 KHz		•	-(98		1
\hat{E}_s/N_{oc}	dB	4	4	4	-Infinity	7	7
RSRP Note 3	dBm/15 KHz	-94	-94	-94	-Infinity	-91	-91
SCH_RP Notes	dBm/15 KHz	-94	-94	-94	-Infinity	-91	-91
Propagation Condition		AWGN					

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall transmit a measurement report containing the cell global identifier of cell 2 within [170] milliseconds from the start of T3.

Test requirement = RRC Procedure delay + $T_{identify GI, inter}$ + reporting delay

- = 15 + 150 + 2ms from the start of T3
- = 167 ms, allow 170 ms.

The UE shall be scheduled continuously throughout the test, and from the start of T3 until 170 ms at least 60 ACK/NACK shall be detected as being transmitted by the UE.

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

NOTE: The overall 80 A CK/NACK number is caused by two parts. Firstly, at least 60 A CK/NA CK shall be sent during identifying the cell global identifier of cell 2 according to the requirement in TS 36.133[4] Section 8.1.2.3.5.1. Secondly, given that continuous DL data allocation, and the measurement gaps have been deconfigured before the start of T3, additional 20 A CK/NACK shall be sent from the start of T3 until 170 ms excludes 150 ms for identifying the cell global identifier of cell 2.

8.16 E-UTRAN Carrier Aggregation Measurements

8.16.1 E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX

8.16.1.1 Test purpose

To verify the UE's ability to make correct reportings of Event A2 and A6 under deactivated SCell in non-DRX within the requirements in TS 36.133[4] section 8.3.3.2.1.

8.16.1.2 Test applicability

This test applies to all types of E-UTRA UE FDD release 10 and forward that support CA. Applicability requires support for FGI bit 111.

8.16.1.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier with in $T_{identify_scc}$, according to the parameter measCycleSCell where $T_{identify_scc} = 20$ measCycleSCell

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,

- SCH_RP|_{dBm} and SCH Es/Iot according to Annex I.2.7 for a corresponding Band

The measurement period for deactivated SCell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in TS 36.133[4] sub-clause 9.1.11 (Carrier aggregation measurement accuracy)

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and SCell belong to the adjacent component carriers in the same frequency band. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the *measCycleSCell* is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwidth, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when *measCycleSCell* is smaller than 640 ms. When *measCycleSCell* is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] clause 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.1.

8.16.1.4 Test description

8.16.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.42 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.16.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.1.4.3.

5. Cell1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier, and Cell3 is the neighbouring cell of Cell 2 on the secondary component carrier, Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test, Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.1.4.1-1: General test parameters for E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions

	Parameter	Unit	Value	Comment
PDS	CH parameters		DL Reference Measurement Channel R.0 FDD	As specified in section A.1.1
_	CH/PDCCH/PHICH meters		DL Reference Measurement Channel R.6 FDD	As specified in section A.2.1
Num			1, 2	Two radio channels are used for this test
	e PCell		Cell 1	Primary cell on RF channel number 1.
SCel			Cell 2	Configured deactivated secondary cell on RF channel number 2.
Neig	hbour cell		Cell 3	Neighbour cell to be identified on RF channel number 2.
(BW _c	nnel Bandwidth	MHz	10	Channel bandwidth for cells on primary and secondary component carriers
CP I	ength		Nomal	
DRX			OFF	Continuous monitoring of primary cell
A2	Hysteresis	dB	0	Hysteresis for evaluation of event A2.
	Threshold RSRP	dBm	-93	Actual RSRP threshold for event A2. Needs to take absolute accuracy tolerance in TS 36.133 [4] section 9.1.11.1 into account plus margin.
	Time To Trigger	S	0	
A6	Hysteresis	dB	0	Hysteresis for evaluation of event A6.
	Offset	dB	-6	Offset parameter for evaluation of event A6. Needs to take relative accuracy tolerance in TS 36.133 [4] section 9.1.11.2 into account plus margin.
	Report on leave		False	
	Time To Trigger	S	0	
	individual offset for cells F channel number 1	dB	0	Individual offset for cells on primary component carrier.
on R	individual offset for cells F channel number 2	dB	0	Individual offset for cells on secondary component carrier.
	coefficient		0	L3 filtering is not used
(mea	I measurement cycle is Cycle SCell)	ms	320	
	timing offset to cell1	μS	0	
	e alignment error een cell2 and cell1	μS	≤ Time alignment error as specified in TS 36.104 [29] clause 6.5.3.1.	The value of time alignment error depends upon the type of carrier aggregation.
Cell3	timing offset to cell1	μS	3	Synchronous cells 3µs or 92*Ts
T1		S	5	During this time the UE shall be aware of cells 1 and 2 but not cell 3.
T2		S	≤12	UE should report Event A6 within 6.4s (20xmeasCycleSCell)
T3		S	5	UE should report Event A2 within 200 ms and 1.6s for cells 1 and 2, respectively.

8.16.1.4.2 Test procedure

The test consists of three successive time periods, with duration of T1, T2 and T3, respectively. During T1 the UE shall not have any information on cell 3. Immediately at beginning of T2 the transmission power of cell 3 is increased to same level as for cell 2, and due to usage of an offset this shall result in reporting of Event A6. At beginning of T3 the transmission powers of cells 1, 2 and 3 are reduced below a threshold value and this shall result in reporting of Event A2 for PCell and SCell, respectively.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all down link physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.16.1.4.3.
- 4. Set the parameters according to T1 in Table 8.16.1.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 5. The SS shall transmit an RRCConnectionReconfiguration message with events A6 and A2 configured.
- 6. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.1.5-1.
- 8. The UE shall transmit a MeasurementReport message triggered by Event A6. If the measurement reporting delay from the beginning of time period T2 is less than 6402ms, then count a success for the event "A6". Otherwise count a fail for the event "A6".
- 9. After the SS receives the MeasurementReport message in step 8) or when T2 expires, the SS shall switch the power setting from T2 to T3 as specified in Table 8.16.1.5-1.
- 10. The UE shall transmit MeasurementReport messages triggered by Event A2 for Cell 1 and Cell 2, respectively.
- 10a. If the measurement reporting delay for Cell 1 from the beginning of time period T3 is less than 200ms, then count a success for the event "Cell 1 A2". Otherwise count a fail for the event "Cell 1 A2".
- 10b. If the measurement reporting delay for Cell 2 from the beginning of time period T3 is less than 1602ms, then count a success for the event "Cell 2 A2". Otherwise count a fail for the event "Cell 2 A2.
- 11. After the SS receives the MeasurementReport message in step 8) and 10) or when T3 expires, the SS shall transmit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop. If physical cell identity of Cell 3 = physical cell identity of Cell 2 then skip this physical cell identity value for Cell 3.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 3-13 until a test verdict has been achieved.

Each of the events "A6", "Cell 1 A2" and "Cell 2 A2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

8.16.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.1.4.3-1: Common Exception messages

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.3.1-7		
·	Table H.4.1-5		
	Table H.4.1-6		

Table 8.16.1.4.3-2: SCellToAddMod-r10

Information Element	Value/remark	Comment	Condition
SCellToAddMod-r10 ::= SEQUENCE {			
sCellIndex-r10	1		
cellIdentification-r10 SEQUENCE {			
physCellId-r10	PhysicalCellIdentity of Cell 2		
dl-CarrierFreq-r10	Same downlink EARFCN as used for Cell 2		
}			
}			

Table 8.16.1.4.3-3: Radio Resource Config Common SCell-r10

Information Element	Value/remark	Comment	Condition
RadioResourceConfigCommonSCell-r10 ::=			
SEQUENCE {			
nonUL-Configuration-r10 SEQUENCE {			
dl-Bandwidth-r10	Same downlink system		
	bandwidth as used for		
	Cell 2		
}			
}			

Table 8.16.1.4.3-4: *MeasConfig:* Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1			
Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectld)) OF SEQUENCE {			
measObjectId[1]	IdMeasObject-f1		
measObject[1]	MeasObjectEUTRA- GENERIC(f1)	Cell 1	
measObjectId[2]	IdMeasObject-f2		
measObject[2]	MeasObjectEUTRA- GENERIC(f2)	Cell 2, 3	
}			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	2 entries		
reportConfigld[1]	IdReportConfig-A6		
reportConfig[1]	ReportConfig-A6		
reportConfigld[2]	IdReportConfig-A2		
reportConfig[2]	ReportConfig-A2-H		
}			
measIdToAddModList SEQUENCE (SIZE	3 entries		
(1maxMeasId)) OF SEQUENCE {	1		
measId[1]	IdNo a Chia at fO		
measObjectId[1]	IdMeasObject-f2		
reportConfigld[1]	IdReportConfig-A6		
measId[2]	2		
measObjectId[2]	IdMeasObject-f1		
reportConfigld[2]	IdReportConfig-A2		
measId[3]	_		
measObjectId[3]	IdMeasObject-f2		
reportConfigld[3]	IdReportConfig-A2		
}			
}			

Table 8.16.1.4.3-5: MeasObjectEUTRA-GENERIC(f2): Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
cellsToAddModList SEQUENCE (SIZE	Not present		
(1maxCellMeas)) { }			
measCycleSCell-r10	sf320		

Table 8.16.1.4.3-6: ReportConfig-A2-H: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation Path: 36.508 clause 4.6.6 table 4.6.6-5 Re	portConfigEUTRA-A2(-93)		
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A2(Thres) ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA2 SEQUENCE {			
a2-Threshold CHOICE {			
threshold-RSRP	47	The actual value is IE value – 140 dBm	
}			
}			
}			
hysteresis	0 (0 dB)		
timeToTrigger	ms0		
}			
}			
triggerQuantity	rsrp		
reportQuantity	both		
maxReportCells	1		
reportInterval	ms 1024		
reportAmount	r1		
}			

Table 8.16.1.4.3-7: MeasurementReport: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5 Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			30110111011
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	2		
measResultPCell ::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			
}			

Table 8.16.1.4.3-8: *MeasurementReport*: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5			
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
meas Results ::= SEQUENCE {			
measld	3		
measResultPCell ::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			
}			

8.16.1.5 Test requirement

Table 8.16.1.4-1 and Table 8.16.1.5-1 define the primary level settings including test tolerances for E-UTRAN FDD-FDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX test.

Table 8.16.1.5-1: Cell specific test parameters for E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions

Parameter	Unit	Cell 1		Cell 2		Cell 3				
		T1	T2	T3	T1	T2	T3	T1	T2	Т3
E-UTRARF Channel Number			1		2		2			
BW _{channel}	MHz		10			10			10	
Timing offset to Cell 1	μS		-			0			3	
OCNG Patterns defined inD.1.1 (OP.1 FDD) and in D.1.2 (OP.2 FDD)		OP.1 FDD		OP.2 FDD		(OP.2 FDD			
PBCH_RA	dB									
PBCH_RB	dB									
PSS_RA	dB									
SSS_RA	dB				0		0			
PCFICH_RB	dB									
PHICH_RA	dB									
PHICH_RB	dB		0							
PDCCH_RA	dB									
PDCCH_RB	dB									
PDSCH_RA	dB									
PDSCH_RB	dB									
OCNG_RA ^{Note 1}	dB									
OCNG_RB ^{NOIE 1}	dB									

N _{oc} Note 2	dBm/15 kHz		-101.00				-101	.00		
RSRP Note 3	dBm/15 kHz	-81.80	-81.80	-	-81.80	-81.80	-	-infinity	-	-
				104.0			104.2		82.00	104.0
				0			0			0
Ë _s /I _{ot}	dB	19.20	19.20	-3.00	19.20	0.15	-4.96	-infinity	-0.25	-4.70
SCH_RP Note 3	dBm/15 kHz	-81.80	-81.80	-	-81.80	-81.80	-	-infinity	-	-
				104.0			104.2		82.00	104.0
				0			0			0
E _s /N _{oc}	dB	19.20	19.20	-3.00	19.20	19.20	-3.20	-infinity	19.00	-3.00
Propagation Condition						FTU70				

- Note 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
- Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface

The actual overall delays measured in the tests may be up to 2×TTI_{DCCH} higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T_{identify scc}

The overall delays measured test requirement for Event A6 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

```
measurement reporting delay = T_{identify\_scc}

T_{identify\_scc} = 20 \ measCycleSCell

measCycleSCell = 320 \ ms
```

The UE shall send one Event A6 triggered measurement report with a measurement reporting delay of less than 6402 ms from the beginning of time T2 (note: this gives a total of 6400 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

In the RRC_CONNECTED state the measurement period for intra frequency RSRP and RSRQ measurements is 200 ms as per TS 36.133[4] section 8.1.2.2.1

The UE shall send one Event A2 triggered measurement report for Cell 1 with a measurement reporting delay of less than 200 ms from beginning of time T3.

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell

The overall delays measured test requirement for Event A2 for Cell 2 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

```
measurement reporting delay = T_{measure\_scc}
where T_{measure\_scc} = 5 measCycleSCell.
```

The UE shall send one Event A2 triggered measurement report for Cell 2 with a measurement reporting delay of less than 1602ms from beginning of time T3 (note: this gives a total of 1600 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95% for each of the events.

The statistical pass/ fail decisions are done separately for Event A6 and Event A2.

Decide the test pass, if events A6 and A2 are passed, otherwise fail the UE.

8.16.2 E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX

8.16.2.1 Test purpose

To verify the UE's ability to make correct reportings of Event A2 and A6 under deactivated SCell in non-DRX within the requirements in TS 36.133[4] section 8.3.3.2.1.

8.16.2.2 Test applicability

This test applies to all types of E-UTRA UE TDD release 10 and forward that support CA. Applicability requires support for FGI bit 111.

8.16.2.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier with in $T_{identify\ scc}$, according to the parameter measCycleSCell where $T_{identify\ scc} = 20\ measCycleSCell$

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|dBm and SCH Es/Iot according to Annex I.2.7 for a corresponding Band

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in TS 36.133[4] sub-clause 9.1.11 (Carrier aggregation measurement accuracy)

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and SCell belong to the adjacent component carriers in the same frequency band as the measured secondary component carrier. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the measCycleSCell is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwdith, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when measCycleSCell is smaller than 640 ms. When measCycleSCell is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty

is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] clause 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.2.

8.16.2.4 Test description

8.16.2.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.42 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.16.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.2.4.3.
- 5. Cell1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier, and Cell3 is the neighbouring cell of Cell 2 on the secondary component carrier. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test, Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.2.4.1-1: General test parameters for E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions

	Parameter	Unit	Value	Comment
PDS	CH parameters		DL Reference Measurement	As specified in section A.1.2
	·		Channel R.0 TDD	·
PCF	ICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2
	meters		Channel R.6 TDD	
E-U	TRARF Channel Number		1, 2	Two radio channels are used for this test
Activ	e PCell		Cell 1	Primary cell on RF channel number 1.
Con	figured deactivated SCell		0.411.0	Configured deactivated secondary cell on
			Cell 2	RF channel number 2.
Neig	hbour cell		0.511.2	Neighbour cell to be identified on RF
			Cell 3	channel number 2.
Cha	nnel Bandwidth (BW _{channel})	MHz	40	Channel bandwidth for cells on primary
	,		10	and secondary component carriers
CPI	ength		Nomal	, ,
	cial subframe			As specified in table 4.2.1 in TS 36.211.
	iguration		6	The same configuration applies to all cells.
	nk-downlink configuration		1	учет обще обще обще обще обще обще обще обще
DRX			OFF	Continuous monitoring of primary cell
A2	Hysteresis	dB	0	Hysteresis for evaluation of event A2.
′ =	Threshold RSRP	dBm	ű	Actual RSRP threshold for event A2.
	Tillesiloid NSIN	ubili		Needs to take absolute accuracy tolerance
			-93	in TS 36.133 [4] section 9.1.11.1 into
				account plus margin.
	Time To Trigger	S	0	account plus margin.
A6	Hysteresis	dB	0	Hysteresis for evaluation of event A6.
AO	Offset	dB	0	Offset parameter for evaluation of event
	Oliset	ub		A6. Needs to take relative accuracy
			-6	tolerance in TS 36.133 [4] section 9.1.11.2
				into account plus margin
	Deport on looks		Foloo	into account plus margin.
	Report on leave		False	
0-11	Time To Trigger	S	0	la dicide al affect for a allegar reference.
	individual offset for cells	dB	0	Individual offset for cells on primary
-	F channel number 1			component carrier.
	individual offset for cells	dB	0	Individual offset for cells on secondary
-	F channel number 2		_	component carrier.
	r coefficient		0	L3 filtering is not used
	Il measurement cycle	ms	320	
	as Cycle SCell)		020	
	2 timing offset to cell1	μS	0	
	e alignment error between	μS	≤ Time alignment error as	The value of time alignment error depends
cell2	and cell1		specified in TS 36.104 [29]	upon the type of carrier aggregation.
			clause 6.5.3.1.	
Cell	3 timing offset to cell1	μS	2	Synchronous cells
	-	1	3	3μs or 92*Ts
T1		S	_	During this time the UE shall be aware of
			5	cells 1 and 2 but not cell 3.
T2		S	Z40	UE should report Event A6 within 6.4s
			≤12	(20xscellMeasCycle)
T3		s	_	UE should report Event A2 within 200 ms
•] -	5	and 1.6s for cells 1 and 2, respectively.
L		1		

8.16.2.4.2 Test procedure

The test consists of three successive time periods, with duration of T1, T2 and T3, respectively. During T1 the UE shall not have any information on cell 3. Immediately at beginning of T2 the transmission power of cell 3 is increased to same level as for cell 2, and due to usage of an offset this shall result in reporting of Event A6. At beginning of T3 the transmission powers of cells 1, 2 and 3 are reduced below a threshold value and this shall result in reporting of Event A2 for PCell and SCell, respectively.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all downlink physical channels except PHICH.

- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.16.2.4.3.
- 4. Set the parameters according to T1 in Table 8.16.2.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 5. The SS shall transmit an RRCConnectionReconfiguration message with events A6 and A2 configured.
- 6. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.2.5-1.
- 8. The UE shall transmit a MeasurementReport message triggered by Event A 6. If the measurement reporting delay from the beginning of time period T2 is less than 6402ms, then count a success for the event "A6". Otherwise count a fail for the event "A6".
- 9. After the SS receives the MeasurementReport message in step 8) or when T2 expires, the SS shall switch the power setting from T2 to T3 as specified in Table 8.16.2.5-1.
- 10. The UE shall transmit MeasurementReport messages triggered by Event A2 for Cell 1 and Cell 2, respectively.
- 10a. If the measurement reporting delay for Cell 1 from the beginning of time period T3 is less, then count a success for the event "Cell 1 A2". Otherwise count a fail for the event "Cell 1 A2".
- 10b. If the measurement reporting delay for Cell 2 from the beginning of time period T3 is less than 1602ms, then count a success for the event "Cell 2 A2". Otherwise count a fail for the event "Cell 2 A2".
- 11. After the SS receives the MeasurementReport message in step 8) and 10) or when T3 expires, the SS shall transmit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 3-13 until a test verdict has been achieved.

Each of the events "A6", "Cell 1 A2" and "Cell 2 A2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

8.16.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.2.4.3-1: Common Exception messages

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
	Table H.4.1-5			
	Table H.4.1-6			

Table 8.16.2.4.3-2: SCellToAddMod-r10

Information Element	Value/remark	Comment	Condition
SCellToAddMod-r10 ::= SEQUENCE {			
sCellIndex-r10	1		
cellIdentification-r10 SEQUENCE {			
physCellId-r10	PhysicalCellIdentity of		
	Cell 2		
dl-CarrierFreq-r10	Same downlink EARFCN		
	as used for Cell 2		
}			

Table 8.16.2.4.3-3: Radio Resource Config Common SCell-r10

Derivation Path: 36.508, Table 4.6.3-13A			
Information Element	Value/remark	Comment	Condition
RadioResourceConfigCommonSCell-r10 ::=			
SEQUENCE {			
nonUL-Configuration-r10 SEQUENCE {			
dl-Bandwidth-r10	Same downlink system bandwidth as used for Cell 2		
}	Cell 2		
}			

Table 8.16.2.4.3-4: *MeasConfig:* Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1 Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectld)) OF SEQUENCE {			
measObjectId[1]	IdMeasObject-f1		
measObject[1]	MeasObjectEUTRA- GENERIC(f1)	Cell 1	
measObjectId[2]	IdMeasObject-f2		
measObject[2]	MeasObjectEUTRA- GENERIC(f2)	Cell 2, 3	
}			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	2 entries		
reportConfigId[1]	IdReportConfig-A6		
reportConfig[1]	ReportConfig-A6		
reportConfigld[2]	IdReportConfig-A2		
reportConfig[2]	ReportConfig-A2-H		
}			
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) OF SEQUENCE {	3 entries		
measId[1]	1		
measObjectId[1]	IdMeasObject-f2		
reportConfigld[1]	IdReportConfig-A6		
measId[2]	2		
measObjectId[2]	IdMeasObject-f1		
reportConfigld[2]	IdReportConfig-A2		
measId[3]	3		
measObjectId[3]	IdMeasObject-f2		
reportConfigId[3]	IdReportConfig-A2		
}			

Table 8.16.2.4.3-5: MeasObjectEUTRA-GENERIC(f2): Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation Path: 36.508 clause 4.6.6-2			
Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
\{			
cellsToAddModList SEQUENCE (SIZE	Not present		
(1maxCellMeas)) {			
cellIndex	2		
physCellId	Physical cell id of Cell 3		
cellIndividualOffset	0		
}			
measCycleSCell-r10	sf320		
}			

Table 8.16.2.4.3-6: ReportConfig-A2-H: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation Path: 36.508 clause 4.6.6 table 4.6.6-5 Re			
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A2(Thres) ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA2 SEQUENCE {			
a2-Threshold CHOICE {			
threshold-RSRP	47	The actual value is IE value – 140 dBm	
}			
}			
}			
hysteresis	0 (0 dB)		
timeToTrigger	ms0		
}			
}			
triggerQuantity	rsrp		
reportQuantity	both		
maxReportCells	1		
reportInterval	ms1024		
reportAmount	r1		
}			

Table 8.16.2.4.3-7: *MeasurementReport*: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5			
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
meas Results ::= SEQUENCE {			
measld	2		
measResultPCell::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			

Table 8.16.2.4.3-8: *MeasurementReport*: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5			
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
meas Results ::= SEQUENCE {			
measld	3		
measResultPCell::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE {			
Meas ResultEUTRA ::= SEQUENCE (SIZE		Report Cell 2	
(1maxCellReport)) OF SEQUENCE {			
physCellId	physCellId of Cell 2		
cgi-Info	Not present		
measResult SEQUENCE {			
rsrpResult	(097)		
rsrqResult	(034)		
}			
}			
}			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			

8.16.2.5 Test requirement

Table 8.16.2.4-1 and Table 8.16.2.5-1 define the primary level settings including test tolerances for E-UTRAN TDD-TDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX test.

Table 8.16.2.5-1: Cell specific test parameters for E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions

Parameter	Unit		Cell 1		Cell 2		Cell 3			
		T1	T2	T3	T1	T2	T3	T1	T2	T3
E-UTRARF Channel		1		2		2				
Number										
BW _{channel}	MHz		10			10			10	
Timing offset to Cell 1	μS		-			0			3	
OCNG Patterns		(OP.1 TDD		(OP.2 TDD		C	P.2 TDD	
defined in D.2.1 (OP.1										
TDD) and in D.2.2										
(OP.2 TDD)										
PBCH_RA	dB									
PBCH_RB	dB									
PSS_RA	dB									
SSS_RA	dB									
PCFICH_RB	dB									
PHICH_RA	dB		0							
PHICH_RB	dB		0		0			0		
PDCCH_RA	dB									
PDCCH_RB	dB									
PDSCH_RA	dB	,								
PDSCH_RB	dB	-								
OCNG_RANOTE T	dB									
OCNG_RB ^{Note 1} Noc ^{Note 2}	dB		404.00				404			
RSRP Note 3	dBm/15 kHz	04.00	-101.00	1	04.00	04.00	-101		1	ı
RSRP	dBm/15 kHz	-81.80	-81.80	104.0	-81.80	-81.80	104.2	-infinity	- 02.00	- 104.0
				0			104.2 0		82.00	0
Ë _s /l _{ot}	dB	19.20	19.20	-3.00	19.20	0.15	-4.96	-infinity	-0.25	-4.70
SCH_RP Note 3	dBm/15 kHz	-81.80	-81.80	-3.00	-81.80	-81.80	-4.90	-infinity	-0.20	-7.70
0011_101	GDIII/ IO KI IZ	301.00	301.00	104.0	301.00	201.00	104.2	-iiiiiiiity	82.00	104.0
				0			0		02.00	0
Ë _s /N _{oc}	dB	19.20	19.20	-3.00	19.20	19.20	-3.20	-infinity	19.00	-3.00
Propagation Condition		ETU70								
NI (4 OONIO I III										

- Note 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{∞} to be fulfilled.
- Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface

The actual overall delays measured in the tests may be up to 2×TTI_{DCCH} higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T_{identify scc}

The overall delays measured test requirement for Event A6 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

measurement reporting delay = $T_{identify\ scc}$

 $T_{identify_scc} = 20 \ measCycleSCell$

measCycleSCell = 320 ms

The UE shall send one Event A6 triggered measurement report with a measurement reporting delay of less than 6402 ms from the beginning of time T2 (note: this gives a total of 6400 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

In the RRC_CONNECTED state the measurement period for intra frequency RSRP and RSRQ measurements is 200 ms as per TS 36.133[4] section 8.1.2.2.1

The UE shall send one Event A2 triggered measurement report for Cell 1 with a measurement reporting delay of less than 202 ms from beginning of time T3.

The measurement period for deactivated scell measurements is T_{measure scc} according to the parameter measCycleSCell

The overall delays measured test requirement for Event A2 for Cell 2 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

```
measurement reporting delay = T_{measure\_scc}
where T_{measure\_scc} = 5 measCycleSCell.
```

The UE shall send one Event A2 triggered measurement report for Cell 2 with a measurement reporting delay of less than 1602ms from beginning of time T3(note: this gives a total of 1600 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95% for each of the events.

The statistical pass/ fail decisions are done separately for Event A6 and Event A2.

Decide the test pass, if events A6 and A2 are passed, otherwise fail the UE.

8.16.3 E-UTRAN FDD-FDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX

8.16.3.1 Test purpose

To verify the UE's ability to make a correct reporting of an event on deactivated SCell with PCell interruption in non-DRX within the E-UTRA FDD-FDD measurements of the secondary component carrier cell search requirements in section 8.3.3.2.1 while at the same time fulfilling the requirements on interruption rate.

8.16.3.2 Test applicability

This test applies to all types of E-UTRA UE FDD release 10 and forward that support intra-band contiguous CA. Applicability requires support for FGI bit 111.

8.16.3.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier within $T_{identify_scc}$, according to the parameter measCycleSCell where $T_{identify_scc} = 20$ measCycleSCell

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|_{dBm} and SCH Es/Iot according to Annex I.2.7 for a corresponding Band

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in TS 36.133[4] sub-clause 9.1.11 (Carrier aggregation measurement accuracy)

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and the SCell belong to the adjacent component carriers in the same frequency band. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the measCycleSCell is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwidth, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when measCycleSCell is smaller than 640 ms. When measCycleSCell is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] clause 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.3.

8.16.3.4 Test description

8.16.3.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1 [10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.16.3.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.3.4.3.

5. There are two E-UTRA FDD carriers with one cell on one E-UTRA FDD carrier and two cells on the other E-UTRA FDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.3.4.1-1: General test parameters for E-UTRAN FDD-FDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX

	Parameter	Unit	Value	Comment
PDS	CH parameters		DL Reference Measurement Channel R.0 FDD	As specified in section A.3.1.1.1
PCFICH/PDCCH/PHICH			DL Reference Measurement	As specified in section A.3.1.2.1
	meters		Channel R.6 FDD	·
E-U1	RARF Channel		1, 2	Two radio channels are used for this test
Num	ber		1, 2	
Acti v	e PCell		Cell 1	Primary cell on RF channel number 1
	igured deactivated		Cell 2	Configured deactivated secondary cell on
SCe	IĪ.		Cell 2	RF channel number 2
Neig	hbour cell		Cell 3	Neighbour cell to be identified on RF channel number 2
Chai	nnel Bandwidth	MHz	40	Channel bandwidth for cells on primary
	channel)		10	and secondary component carriers
	ength		Nomal	
DRX			OFF	Continuous monitoring of primary cell
A6	Hysteresis	dB	0	Hysteresis for evaluation of event A6
	Offset	dB		Offset parameter for evaluation of event
			-3	A6. Needs to take relative accuracy
			-3	tolerance in section 9.1.11.2 in TS 36.133
				[4] into account plus margin
	Report on leave		False	
	Time To Trigger	S	0	
Cell-	individual offset for cells	dB	0	Individual offset for cells on primary
_	F channel number 1		0	component carrier.
	individual offset for cells	dB	0	Individual offset for cells on secondary
on R	F channel number 2		0	component carrier
	coefficient		0	L3 filtering is not used
	I measurement cycle	ms	1280	
	timing offset to cell1	μS	0	
Time	alignment error	μS	≤ Time alignment error as	The value of time alignment error depends
betw	een cell2 and cell1	·	specified in TS 36.104 [29]	upon the type of carrier aggregation.
			clause 6.5.3.1.	
Cell3 timing offset to cell1		μS	3	Synchronous cells
			3	3μs or 92*Ts
T1		S	5	During this time the UE shall be aware of
			5	cells 1 and 2 but not cell 3
T2		S	≤30	UE should report Event A6 within 25.6s
			230	(20xscellMeasCycle)

8.16.3.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. In the measurement control information it is indicated to the UE that event-triggered reporting with Event A6 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 3. Starting T2, Cell 3 becomes detectable and the UE is expected to detect and send a measurement report. The UE shall be scheduled on PCell continuously throughout the test.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.

- 4. Set the parameters according to T1 in Table 8.16.3.5-1 as appropriate. Propagation conditions are set according to Annex B clauses B.1.1. T1 starts.
- 5. The SS shall transmit an RRCConnectionReconfiguration message with Event A6 configured.
- 6. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.3.5-1.
- 8. UE shall transmit a MeasurementReport message triggered by Event A6. If the overall delays measured from the beginning of time period T2 is less than 25602 ms and at least 99.5% of all ACK/NACKS transmitted by the UE are detected by the system simulator until the measurement report is received during T2 the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement or less than 99.5% of all ACK/NACKS transmitted by the UE are detected by the system simulator then the number of failure tests is increased by one.
- 9. After the SS receives the MeasurementReport message in step 8) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 10. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop. If physical cell identity of Cell 3 = physical cell identity of Cell 2 then skip this physical cell identity value for Cell 3.
- 11. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF-CA according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 12. Repeat step 3-11 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.16.3.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.3.4.3-1: Common Exception messages for E-UTRAN FDD-FDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX

Default Message Contents						
Common contents of system information blocks exceptions						
Default RRC messages and information	Table H.3.1-1					
elements contents exceptions	Table H.3.1-7					
	Table H.4.1-2					
	Table H.4.1-3					
	Table H.4.1-5					
	Table H.4.1-6					

Table 8.16.3.4.3-2: SchedulingRequest-Config-DEFAULT: Additional E-UTRAN FDD-FDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX test requirements

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-20 SchedulingRequest-Config-DEFAULT								
Information Element	Value/remark	Comment	Condition					
SchedulingRequest-Config-DEFAULT ::= CHOICE {								
setup SEQUENCE {								
sr-PUCCH-ResourceIndex	41	10 MHz channel bandwidth parameter						
sr-ConfigIndex	0							
dsr-TransMax	n4							
}								
}								

8.16.3.5 Test requirement

Table 8.16.3. 4.1-1 and Table 8.16.3.5-1 define the primary level settings including test tolerances for E-UTRAN FDD-FDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX test.

Table 8.16.3.5-1: Cell specific test parameters for E-UTRAN FDD-FDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX

Parameter	Unit	Cell 1		Се	ell 2	Cel	Cell 3	
	-	T1	T2	T1	T2	T1	T2	
E-UTRARF Channel		1			2			
Number								
BW _{channel}	MHz	1	0	1	10	10	10	
OCNG Pattern defined								
in D.1.1 (OP.1 FDD)		OP.1	FDD	OP.2	P FDD	OP.2	FDD	
and in D.1.2 (OP.2)								
Timing offset to Cell1	μS		-		0	3	}	
PBCH_RA	dB							
PBCH_RB	dB							
PSS_RA	dB							
SSS_RA	dB							
PCFICH_RB	dB							
PHICH_RA	dB							
PHICH_RB	dB	()	0		0		
PDCCH_RA	dB							
PDCCH_RB	dB							
PDSCH_RA	dB							
PDSCH_RB	dB							
OCNG_RA ^{NOIE 1}	dB							
OCNG_RB ^{NOTE 1}	dB							
$N_{oc}^{ m Note~3}$	dBm/15 kHz	-98						
RSRP Note 4	dBm/15 kHz	-82	-82	-82	-82	-Infinity	-82	
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	16	16	16	-0.11	-Infinity	-0.11	
SCH_RP Note 4	dBm/15 kHz	-82	-82	-82	-82	-Infinity	-82	
\hat{E}_s/N_{oc}	dB	16	16	16	16	-Infinity	16	
Propagation Condition		AWGN						

- NOTE 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- NOTE 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.
- NOTE 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
- NOTE 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A6 triggered measurement report, with a measurement reporting delay less than 25602 ms from the beginning of time period T2.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A6 triggered measurement report to Cell 3.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = 25.6s

TTI insertion uncertainty = $TTI_{DCCH} = 1$ ms; $2xTTI_{DCCH} = 2$ ms

The overall delays measured shall be less than a total of 25602 ms in this test case (note: this gives a total of 25.6s for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The UE shall be scheduled on PCell continuously throughout the test. From the start of T1 until the measurement report is received during T2, at least 99.5% of all ACK/NACKs transmitted by the UE shall be detected by the system simulator.

For a test to be considered successful requirements on both event detection and percentage of transmitted ACK/NACKs have to be fulfilled simultaneously.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

NOTE: The actual overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

8.16.4 E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX

8.16.4.1 Test purpose

To verify the UE's ability to make a correct reporting of an event on deactivated SCell with PCell interruption in non-DRX within the E-UTRA TDD-TDD measurements of the secondary component carrier cell search requirements in section 8.3.3.2.1 while at the same time fulfilling the requirements on interruption rate.

8.16.4.2 Test applicability

This test applies to all types of E-UTRA UE TDD release 10 and forward that support intra-band contiguous CA.

8.16.4.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier within $T_{identify_scc}$, according to the parameter measCycleSCell where $T_{identify_scc} = 20$ measCycleSCell.

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|_{dBm} and SCH Es/Iot according to Annex I.2.7 for a corresponding Band

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in TS 36.133[4] sub-clause 9.1.11 (Carrier aggregation measurement accuracy)

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and the SCell belong to the adjacent component carriers in the same frequency band. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the measCycleSCell is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwidth, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when measCycleSCell is smaller than 640 ms. When measCycleSCell is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] clause 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.4.

8.16.4.4 Test description

8.16.4.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1 [10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.16.4.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.4.4.3.
- 5. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.4.4.1-1: General test parameters for E-UTRAN TDD-TDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX

	Parameter	Unit	Value	Comment
PDS	CH parameters		DL Reference Measurement Channel R.0 TDD	As specified in section A.3.1.1.2
I	CH/PDCCH/PHICH neters		DL Reference Measurement Channel R.6 TDD	As specified in section A.3.1.2.2
	RARF Channel		1,2	Two radio channels are used for this test
	e PCell		Cell 1	Primary cell on RF channel number 1
	gured deactivated		Cell 2	Configured deactivated secondary cell on RF channel number 2
Neigh	nbour cell		Cell 3	Neighbour cell to be identified on RF channel number 2
(BW _c		MHz	10	Channel bandwidth for cells on primary and secondary component carriers
CP le			Nomal	
confi	ial subframe guration		6	As specified in table 4.2.1 in TS 36.211 [8] The same configuration applies to all cells
confi	k-downlink guration		1	
DRX			OFF	Continuous monitoring of primary cell
A6	Hysteresis	dB	0	Hysteresis for evaluation of event A6.
	Offset	dB	-3	Offset parameter for evaluation of event A6. Needs to take relative accuracy tolerance in section 9.1.11.2 in TS 36.133 [4] into account plus margin
	Report on leave		False	
	Time To Trigger	S	0	
	ndividual offset for cells F channel number 1	dB	0	Individual offset for cells on primary component carrier
on R	ndividual offset for cells F channel number 2	dB	0	Individual offset for cells on secondary component carrier
	coefficient		0	L3 filtering is not used
	l measurement cycle	ms	1280	
	timing offset to cell1	μS	0	
betwo	alignment error een cell2 and cell1	μS	≤ Time alignment error as specified in TS 36.104 [29] clause 6.5.3.1.	The value of time alignment error depends upon the type of carrier aggregation.
	timing offset to cell1	μS	3	Synchronous cells 3µs or 92*Ts
T1		S	5	During this time the UE shall be aware of cells 1 and 2 but not cell 3
T2		S	≤30	UE should report Event A6 within 25.6s (20xscellMeasCycle)

8.16.4.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. In the measurement control information it is indicated to the UE that event-triggered reporting with Event A6 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 3. Starting T2, Cell 3 becomes detectable and the UE is expected to detect and send a measurement report. The UE shall be scheduled on PCell continuously throughout the test.

- 1. Ensure the UE is in State 3A-RF-CA according to TS 36.508 [7] clause 7.2A.5.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. Set the parameters according to T1 in Table 8.16.4.5-1 as appropriate. Propagation conditions are set according to Annex B clauses B.1.1. T1 starts.

- 5. SS shall transmit an RRCConnectionReconfiguration message.
- 6. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.4.5-1.
- 8. UE shall transmit a MeasurementReport message triggered by Event A6. If the overall delays measured from the beginning of time period T2 is less than 25602 ms and at least 99.5% of all ACK/NACKS transmitted by the UE are detected by the system simulator until the measurement report is received during T2 the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement or less than 99.5% of all ACK/NACKS transmitted by the UE are detected by the system simulator then the number of failure tests is increased by one.
- 9. After the SS receive the MeasurementReport message in step 8) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 10. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 11. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF-CA according to TS 36.508 [7] clause 7.2A.3.
- 12. Repeat step 3-11 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.16.4.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.4.4.3-1: Common Exception messages for E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX

Default Message Contents						
Common contents of system information blocks exceptions						
Default RRC messages and information elements contents exceptions	Table H.3.1-1 Table H.3.1-7 Table H.4.1-2 Table H.4.1-3 Table H.4.1-5 Table H.4.1-6					

Table 8.16.4.4.3-2: SchedulingRequest-Config-DEFAULT: Additional E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX test requirements

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-20 SchedulingRequest-Config-DEFAULT							
Information Element	Value/remark	Comment	Condition				
SchedulingRequest-Config-DEFAULT ::= CHOICE {							
setup SEQUENCE {							
sr-PUCCH-ResourceIndex	41	10 MHz channel bandwidth parameter					
sr-ConfigIndex	0						
dsr-TransMax	n4						
}							
}							

8.16.4.5 Test requirement

Table 8.16.4.4.1-1 and Table 8.16.4.5-1 define the primary level settings including test tolerances for E-UTRAN TDD-TDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX test.

Table 8.16.4.5-1: Cell specific test parameters for E-UTRAN TDD-TDD Event triggered reporting on configured but deactivated SCell with PCell interruption in non-DRX

Unit	Cel	l 1	Cell 2		Cell 3		
Ī	T1	T2	T1	T2	T1	T2	
	1			2			
MHz	10	0	1	0	10	0	
	OP.1	TDD	OP.2	? TDD	OP.2	TDD	
μS	-		(0	3	3	
dB							
dB							
dB							
dB							
			0		0		
dB	0)					
dB							
dB							
dBm/15 kHz	-98						
dBm/15 kHz	-82	-82	-82	-82	-Infinity	-82	
dB	16	16	16	-0.11	-Infinity	-0.11	
dBm/15 kHz	-82	-82	-82	-82	-Infinity	-82	
dB	16	16	16	16	-Infinity	16	
	AWGN						
	μs dB	MHz 10 MHz 10 OP.1 μS	T1 T2 MHz 10 OP.1 TDD μs - dB - dB dB dBm/15 kHz -82 -82 dBm/15 kHz -82 -82	MHz	T1 T2 T1 T2 MHz 10 10 OP.1 TDD OP.2 TDD μs - 0 dB dB dBm/15 kHz -82 -82 -82 dBm/15 kHz -82 -82 -82 dB 16 16 16 16 dBm/15 kHz -82 -82 -82 dB 16 16 16 16	T1 T2 T1 T2 T1 T2 T1 T2 T1 T3 T3 T3 T3 T4 T4 T5 T5 T5 T5 T5 T5	

NOTE 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

NOTE 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

NOTE 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

NOTE 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A6 triggered measurement report, with a measurement reporting delay less than 25602 ms from the beginning of time period T2.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A6 triggered measurement report to Cell 3.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = 25.6s

TTI insertion uncertainty = $TTI_{DCCH} = 1$ ms; $2xTTI_{DCCH} = 2$ ms

The overall delays measured shall be less than a total of 25602 ms in this test case (note: this gives a total of 25.6s for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports, as long as the reporting criteria are not fulfilled.

The UE shall be scheduled on PCell continuously throughout the test. From the start of T1 until the measurement report is received during T2, at least 99.5% of all ACK/NACKs transmitted by the UE shall be detected by the system simulator.

For a test to be considered successful requirements on both event detection and percentage of transmitted ACK/NACKs have to be fulfilled simultaneously.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

NOTE: The actual overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

8.16.5 E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The Test system uncertainties applicable to this test are undefined
- The Test tolerances applicable to this test are undefined

8.16.5.1 Test purpose

To verify the UE's ability to make correct reportings of Event A2 and A6 under deactivated SCell in non-DRX within the requirements in TS 36.133[4] section 8.3.3.2.1.

8.16.5.2 Test applicability

This test applies to all types of E-UTRA UE FDD release 10 and forward that support CA. Applicability requires support for FGI bit 111.

8.16.5.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier with in $T_{identify_scc}$, according to the parameter measCycleSCell where $T_{identify_scc} = 20$ measCycleSCell.

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|_{dBm} and SCH Es/Iot according to Annex B.2.7 for a corresponding Band.

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in the sub-clause 9.1.11 (Carrier aggregation measurement accuracy).

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and the SCell belong to the adjacent component carriers in the same frequency band. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the *measCycleSCell* is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwidth, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when *measCycleSCell* is smaller than 640 ms. When *measCycleSCell* is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which is caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.5.

8.16.5.4 Test description

8.16.5.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.42 as appropriate.
- $2. \ The \ general \ test \ parameter \ settings \ are \ set \ up \ according \ to \ Table \ 8.16.5.4.1-1.$
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.5.4.3.
- 5. Cell1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier, and Cell3 is the neighbouring cell of Cell 2 on the secondary component carrier, Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test, Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.5.4.1-1: General test parameters for E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.4 FDD	As specified in section A.1.1
DOE!OU/DDOOU/DUIOU			
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.10 FDD	
Channel Bandwidth	MHz	20	Channel bandwidth for cells on primary
(BW _{channel})		20	and secondary component carriers
Note 1. Con Toble 0.16.1.	1 1 1 5	ther general test personeters	•

Note 1: See Table 8.16.1.4.1-1 for other general test parameters.

[Note 2: This test verifies the RRM requirement which is independent of channel bandwidth and is performed according to the principle defined in TS 36.133 [4] section A.3.6.1.]

8.16.5.4.2 Test procedure

The test consists of three successive time periods, with duration of T1, T2 and T3, respectively. During T1 the UE shall not have any information on cell 3. Immediately at beginning of T2 the transmission power of cell 3 is increased to same level as for cell 2, and due to usage of an offset this shall result in reporting of Event A6. At beginning of T3 the transmission powers of cells 1, 2 and 3 are reduced below a threshold value and this shall result in reporting of Event A2 for PCell and SCell, respectively.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all down link physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.16.5.4.3.
- 4. Set the parameters according to T1 in Table 8.16.5.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 5. The SS shall transmit an RRCConnectionReconfiguration message with events A6 and A2 configured.
- 6. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.5.5-1.
- 8. The UE shall transmit a MeasurementReport message triggered by Event A 6. If the measurement reporting delay from the beginning of time period T2 is less than 6402ms, then count a success for the event "A6". Otherwise count a fail for the event "A6".
- 9. After the SS receives the MeasurementReport message in step 8) or when T2 expires, the SS shall switch the power setting from T2 to T3 as specified in Table 8.16.5.5-1.
- 10. The UE shall transmit MeasurementReport messages triggered by Event A2 for Cell 1 and Cell 2, respectively.
- 10a. If the measurement reporting delay for Cell 1 from the beginning of time period T3 is less than 200ms, then count a success for the event "Cell 1 A2". Otherwise count a fail for the event "Cell 1 A2".
- 10b. If the measurement reporting delay for Cell 2 from the beginning of time period T3 is less than 1602ms, then count a success for the event "Cell 2 A2". Otherwise count a fail for the event "Cell 2 A2.
- 11. After the SS receives the MeasurementReport message in step 8) and 10) or when T3 expires, the SS shall transmit an RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop. If physical cell identity of Cell 3 = physical cell identity of Cell 2 then skip this physical cell identity value for Cell 3.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 3-13 until a test verdict has been achieved.

Each of the events "A6", "Cell 1 A2" and "Cell 2 A2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

8.16.5.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.5.4.3-1: Common Exception messages

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
	Table H.4.1-5			
	Table H.4.1-6			

Table 8.16.5.4.3-2: SCellToAddMod-r10

Information Element	Value/remark	Comment	Condition
SCellToAddMod-r10 ::= SEQUENCE {			
sCellIndex-r10	1		
cellIdentification-r10 SEQUENCE {			
physCellId-r10	PhysicalCellIdentity of Cell 2		
dl-CarrierFreq-r10	Same downlink EARFCN as used for Cell 2		
}			
}			

Table 8.16.5.4.3-3: Radio Resource Config Common SCell-r10

Value/remark	Comment	Condition
Same downlink system bandwidth as used for Cell 2	n100	
	Same downlink system bandwidth as used for	Same downlink system n100 bandwidth as used for

Table 8.16.5.4.3-4: *MeasConfig:* Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1			
Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectld)) OF SEQUENCE {			
measObjectId[1]	ldMeasObject-f1		
measObject[1]	MeasObjectEUTRA- GENERIC(f1)	Cell 1	
measObjectId[2]	IdMeasObject-f2		
measObject[2]	MeasObjectEUTRA- GENERIC(f2)	Cell 2, 3	
}			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	2 entries		
reportConfigld[1]	IdReportConfig-A6		
reportConfig[1]	ReportConfig-A6		
reportConfigId[2]	IdReportConfig-A2		
reportConfig[2]	ReportConfig-A2-H		
}			
measIdToAddModList SEQUENCE (SIZE	3 entries		
(1maxMeasId)) OF SEQUENCE {			
measId[1]	1		
measObjectId[1]	ldMeasObject-f2		
reportConfigld[1]	IdReportConfig-A6		
measId[2]	2		
measObjectId[2]	ldMeasObject-f1		
reportConfigld[2]	IdReportConfig-A2		
measId[3]	3		
measObjectId[3]	IdMeasObject-f2		
reportConfigId[3]	IdReportConfig-A2		
}		-	
}			

Table 8.16.5.4.3-5: MeasObjectEUTRA-GENERIC(f2): Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
cellsToAddModList SEQUENCE (SIZE	Not present		
(1maxCellMeas)) { }	_		
measCycleSCell-r10	sf320		

Table 8.16.5.4.3-6: ReportConfig-A2-H: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation Path: 36.508 clause 4.6.6 table 4.6.6-5 Re	portConfigEUTRA-A2(-90)		
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A2(Thres) ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA2 SEQUENCE {			
a2-Threshold CHOICE {			
threshold-RSRP	47	The actual value is IE value – 140 dBm	
}			
}			
}			
hysteresis	0 (0 dB)		
timeToTrigger	ms0		
}			
}			
triggerQuantity	rsrp		
reportQuantity	both		
maxReportCells	1		
reportInterval	ms1024		
reportAmount	r1		
}			

Table 8.16.5.4.3-7: *MeasurementReport*: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5			
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	2		
measResultPCell ::= SEQUENCE {		Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			
}			

Table 8.16.5.4.3-8: MeasurementReport: Additional E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5 Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {	Valadittomark	Common	Jonation
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	3		
measResultPCell ::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)	<u>'</u>	
rsrqResult	(034)		
}			
measResultNeighCells CHOICE {			
MeasResultEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE (SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqId-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			
}			

8.16.5.5 Test requirement

Table 8.16.5.4-1 and Table 8.16.5.5-1 define the primary level settings including test tolerances for E-UTRAN FDD-FDD Event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation condition for 20 MHz channel BW.

Table 8.16.5.5-1: Cell specific test parameters for E-UTRAN FDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz

Parameter	Unit	Cell 1		Cell 1 Cell 2		Cell 3				
		T1	T2	T3	T1	T2	T3	T1	T2	T3
BW _{channel}	MHz	20			20		20			
OCNG Patterns										
defined in D.1.11		OP.11 FDD OP.12 FDD		OP.12 FDD		OP.12 FDD				
(OP.11 FDD) and in								,		
D.1.12 (OP.12 FDD)										
Note: See Table 8.16.1.5-1 for other cell-specific test parameters.										

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface.

The actual overall delays measured in the tests may be up to $2 \times TTI_{DCCH}$ higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than Tidentify_scc.

The overall delays measured test requirement for Event A6 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty.

Where:

```
measurement reporting delay = T_{identify\_scc.}

T_{identify\_scc} = 20 \ measCycleSCell
```

```
measCycleSCell = 320 \text{ ms}
```

The UE shall send one Event A6 triggered measurement report with a measurement reporting delay of less than 6402 ms from the beginning of time T2 (note: this gives a total of 6400 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

In the RRC_CONNECTED state the measurement period for intra frequency RSRP and RSRQ measurements is 200 ms as per TS 36.133[4] section 8.1.2.2.1.

The UE shall send one Event A2 triggered measurement report for Cell 1 with a measurement reporting delay of less than 200 ms from beginning of time T3.

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell

The overall delays measured test requirement for Event A2 for Cell 2 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty.

Where:

```
measure ment reporting delay = T_{measure\_scc}
where T_{measure\_scc} = 5 measCycleSCell.
```

The UE shall send one Event A2 triggered measurement report for Cell 2 with a measurement reporting delay of less than 1602ms from beginning of time T3(note: this gives a total of 1600 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95% for each of the events.

The statistical pass/fail decisions are done separately for Event A6 and Event A2.

Decide the test pass, if events A6 and A2 are passed, otherwise fail the UE.

8.16.6 E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The Test system uncertainties applicable to this test are undefined
- The Test tolerances applicable to this test are undefined

8.16.6.1 Test purpose

To verify the UE's ability to make correct reportings of Event A2 and A6 under deactivated SCell in non-DRX for 20 MHz bandwidth within the requirements in TS 36.133[4] section 8.3.3.2.1.

8.16.6.2 Test applicability

This test applies to all types of E-UTRA UE TDD release 10 and forward that support CA 20 MHz channel bandwidth for both PCell and SCell. Applicability requires support for FGI bit 111.

8.16.6.3 Minimum conformance requirements

When no DRX is in use the UE shall be able to identify a new detectable FDD or TDD cell on the secondary component carrier with in $T_{identify_scc}$, according to the parameter measCycleSCell where $T_{identify_scc} = 20$ measCycleSCell.

A cell shall be considered detectable when

- RSRP related side condition given in Section 9.1 are fulfilled for a corresponding Band,
- SCH_RP|_{dBm} and SCH Es/Iot according to Annex B.2.7 for a corresponding Band

The measurement period for deactivated scell measurements is $T_{measure_scc}$ according to the parameter measCycleSCell where $T_{measure_scc} = 5$ measCycleSCell. The UE shall be capable of performing RSRP and RSRQ measurements for 8 identified cells on the secondary component carrier, and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{measure_scc}$.

The measurement accuracy for all measured cells shall be as specified in the sub-clause 9.1.11 (Carrier aggregation measurement accuracy).

A UE may reconfigure receiver bandwidth taking into account the SCell activation/deactivation status, and when making measurements of cells on an SCC with deactivated SCell. This may cause interruptions (packet drops) to a PCell when the PCell and the SCell belong to the adjacent component carriers in the same frequency band. Such interruptions due to making measurements are allowed with up to 0.5% probability of missed ACK/NACK when the *measCycleSCell* is larger than or equal to 640 ms. Otherwise, no interruptions shall be allowed. The requirement considers only missed ACK/NACK due to reconfiguration of the receiver bandwidth, and not due to other causes such as RF impairments or channel conditions. No interruptions due to the SCell activation/deactivation status changes shall be allowed at least when *measCycleSCell* is smaller than 640 ms. When *measCycleSCell* is larger than or equal to 640 ms, interruption duration due to the SCell activation/deactivation status change shall not exceed 5 ms within the activation/deactivation procedure. If the UE receives an RRC message implying that no SCell is configured, no interruptions due to receiver bandwidth reconfiguration shall occur after the corresponding RRC procedure delay has elapsed.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which is caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_scc}$ defined in TS 36.133 [4] section 8.3.3.2.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{measure_scc}$ provided the timing to that cell has not changed more than ± 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.3.3.2.1 and A.8.16.6.

8.16.6.4 Test description

8.16.6.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.42 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.16.6.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.16.6.4.3.
- 5. Cell1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier, and Cell3 is the neighbouring cell of Cell 2 on the secondary component carrier. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test, Cell 2 and Cell 3 shall be powered OFF.

Table 8.16.6.4.1-1: General test parameters for E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz

Parameter	Unit	Value	Comment				
PDSCH parameters		DL Reference Measurement	As specified in section A.1.2				
		Channel R.3 TDD					
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2				
parameters		Channel R.10 TDD					
Channel Bandwidth	MHz	20	Channel bandwidth for cells on primary				
(BW _{channel})		20	and secondary component carriers				
Note 1: See Table 8.16.2.4.1-1 for other general test parameters.							
[Note 2: This test verifies the RRM requirement which is independent of channel bandwidth and is performed according							
to the principle defined in TS 36.133 [4] section A.3.6.1.]							

8.16.6.4.2 Test procedure

The test consists of three successive time periods, with duration of T1, T2 and T3, respectively. During T1 the UE shall not have any information on cell 3. Immediately at beginning of T2 the transmission power of cell 3 is increased to same level as for cell 2, and due to usage of an offset this shall result in reporting of Event A6. At beginning of T3 the transmission powers of cells 1, 2 and 3 are reduced below a threshold value and this shall result in reporting of Event A2 for PCell and SCell, respectively.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all down link physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.16.6.4.3.
- 4. Set the parameters according to T1 in Table 8.16.6.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 5. The SS shall transmit an RRCConnectionReconfiguration message with events A6 and A2 configured.
- 6. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 7. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.16.6.5-1.
- 8. The UE shall transmit a MeasurementReport message triggered by Event A 6. If the measurement reporting delay from the beginning of time period T2 is less than 6402ms, then count a success for the event "A6". Otherwise count a fail for the event "A6".
- 9. After the SS receives the MeasurementReport message in step 8) or when T2 expires, the SS shall switch the power setting from T2 to T3 as specified in Table 8.16.6.5-1.
- 10. The UE shall transmit MeasurementReport messages triggered by Event A2 for Cell 1 and Cell 2, respectively.
- 10a. If the measurement reporting delay for Cell 1 from the beginning of time period T3 is less, then count a success for the event "Cell 1 A2". Otherwise count a fail for the event "Cell 1 A2".
- 10b. If the measurement reporting delay for Cell 2 from the beginning of time period T3 is less than 1602ms, then count a success for the event "Cell 2 A2". Otherwise count a fail for the event "Cell 2 A2".

- 11. After the SS receives the MeasurementReport message in step 8) and 10) or when T3 expires, the SS shall transmit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 12. Set Cell 3 physical cell identity = ((current cell 3 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop. If physical cell identity of Cell 3 = physical cell identity of Cell 2 then skip this physical cell identity value for Cell 3.
- 13. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 14. Repeat step 3-13 until a test verdict has been achieved.

Each of the events "A6", "Cell 1 A2" and "Cell 2 A2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

8.16.6.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.16.6.4.3-1: Common Exception messages

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
	Table H.4.1-5			
	Table H.4.1-6			

Table 8.16.6.4.3-2: SCellToAddMod-r10

Derivation Path: 36.508, Table 4.6.3-19D			
Information Element	Value/remark	Comment	Condition
SCellToAddMod-r10 ::= SEQUENCE {			
sCellIndex-r10	1		
cellIdentification-r10 SEQUENCE {			
physCellId-r10	PhysicalCellIdentity of		
	Cell 2		
dl-CarrierFreq-r10	Same downlink EARFCN		
	as used for Cell 2		
}			
}			

Table 8.16.6.4.3-3: RadioResourceConfigCommonSCell-r10

Derivation Path: 36.508, Table 4.6.3-13A					
Information Element	Value/remark	Comment	Condition		
RadioResourceConfigCommonSCell-r10 ::=					
SEQUENCE {					
nonUL-Configuration-r10 SEQUENCE {					
dl-Bandwidth-r10	Same downlink system bandwidth as used for Cell 2	n100			
}					
}					

Table 8.16.6.4.3-4: *MeasConfig:* Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions requirements, 20 MHz

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1			
Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectld)) OF SEQUENCE {			
measObjectId[1]	ldMeasObject-f1		
measObject[1]	MeasObjectEUTRA- GENERIC(f1)	Cell 1	
measObjectId[2]	ldMeasObject-f2		
measObject[2]	MeasObjectEUTRA- GENERIC(f2)	Cell 2, 3	
}			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	2 entries		
reportConfigld[1]	IdReportConfig-A6		
reportConfig[1]	ReportConfig-A6		
reportConfigld[2]	IdReportConfig-A2		
reportConfig[2]	ReportConfig-A2-H		
}			
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) OF SEQUENCE {	3 entries		
measId[1]	1		
measObjectId[1]	IdMeasObject-f2		
reportConfigld[1]	IdReportConfig-A6		
measId[2]	2		
measObjectId[2]	IdMeasObject-f1		
reportConfigld[2]	IdReportConfig-A2		
measId[3]	3		
measObjectId[3]	IdMeasObject-f2		
reportConfigld[3]	IdReportConfig-A2		
}			
}		-	-

Table 8.16.6.4.3-5: MeasObjectEUTRA-GENERIC(f2): Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
cellsToAddModList SEQUENCE (SIZE	Not present		
(1maxCellMeas)) { }			
measCycleSCell-r10	sf320		

Table 8.16.6.4.3-6: ReportConfig-A2-H: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation Path: 36.508 clause 4.6.6 table 4.6.6-5 Re	portConfigEUTRA-A2(-90)		
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A2(Thres) ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventld CHOICE {			
eventA2 SEQUENCE {			
a2-Threshold CHOICE {			
threshold-RSRP	47	The actual value is IE value – 140 dBm	
}			
}			
}			
h ysteresis	0 (0 dB)		
timeToTrigger	ms0		
}			
}			
triggerQuantity	rsrp		
reportQuantity	both		
maxReportCells	1		
reportInterval	ms1024		
reportAmount	r1		
}			

Table 8.16.6.4.3-7: *MeasurementReport*: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Derivation path: 36.508 4.6.1 table 4.6.1-5 Information Element	Value/Remark	Comment	Condition
	value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	2		
measResultPCell::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE { }	Not present		
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			

Table 8.16.6.4.3-8: MeasurementReport: Additional E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz requirements

Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	3		
measResultPCell::= SEQUENCE {		Report Cell 1	
rsrpResult	(097)		
rsrqResult	(034)		
}			
measResultNeighCells CHOICE {			
MeasResultEUTRA ::= SEQUENCE (SIZE	Not present		
(1maxCellReport)) OF SEQUENCE { }			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 2	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			
}			
}			
}			
}			

8.16.6.5 Test requirement

Table 8.16.6.4-1 and Table 8.16.6.5-1 define the primary level settings including test tolerances for E-UTRAN TDD-TDD Event triggered reporting on configured but deactivated SCell in non-DRX test under fading propogation conditions for 20 MHz channel BW.

Table 8.16.6.5-1: Cell specific test parameters for E-UTRAN TDD event triggered reporting on configured but deactivated SCell in non-DRX under fading propagation conditions, 20 MHz

Parameter	Unit	Cell 1		Cell 2		Cell 3				
		T1	T2	T3	T1	T2	T3	T1	T2	Т3
BW _{channel}	MHz	20		20		20				
OCNG Patterns										
defined in D.2.7 (OP.7		OP.7 TDD		OP.8 TDD		OP.8 TDD				
TDD) and in D.2.8				OF.7 100 OF.8 100			OF.6 TDD			
(OP.8 TDD)										
Note: See Table 8.16.2.5-1 for other cell-specific test parameters.										

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface.

The actual overall delays measured in the tests may be up to $2\times TTI_{DCCH}$ higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T_{identify_scc.}

The overall delays measured test requirement for Event A6 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

```
measurement reporting delay = T_{identify\_scc}

T_{identify\_scc} = 20 \ measCycleSCell

measCycleSCell = 320 \ ms
```

The UE shall send one Event A6 triggered measurement report with a measurement reporting delay of less than 6402 ms from the beginning of time T2 (note: this gives a total of 6400 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

In the RRC_CONNECTED state the measurement period for intra frequency RSRP and RSRQ measurements is 200 ms as per TS 36.133[4] section 8.1.2.2.1.

The UE shall send one Event A2 triggered measurement report for Cell 1 with a measurement reporting delay of less than 202 ms from beginning of time T3.

The measurement period for deactivated scell measurements is T_{measure scc} according to the parameter measCycleSCell.

The overall delays measured test requirement for Event A2 for Cell 2 is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Where:

```
measure ment reporting delay = T_{measure\_scc}
where T_{measure\_scc} = 5 measCycleSCell.
```

The UE shall send one Event A2 triggered measurement report for Cell 2 with a measurement reporting delay of less than 1602ms from beginning of time T3 (note: this gives a total of 1600 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The UE shall not send event triggered measurement reports as long as the reporting criteria are not fulfilled.

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95% for each of the events.

The statistical pass/fail decisions are done separately for Event A6 and Event A2.

Decide the test pass, if events A6 and A2 are passed, otherwise fail the UE.

8.18.1 E-UTRAN TDD-HRPD event triggered reporting under fading propagation conditions

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The Test system uncertainties applicable to this test are undefined
- The Test tolerances applicable to this test are undefined

8.18.1.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions within the E-UTRA TDD - HRPD cell search requirements.

8.18.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 9 and forward that support HRPD. Applicability requires support for FGI bit 15.

8.18.1.3 Minimum requirement

UE shall perform HRPD measurements according to the procedure defined in 3GPP2 C.S0024-B on the HRPD neighbour cells indicated by the serving eNode B. If measurement gaps are required, the UE shall perform HRPD measurements only during the measurement gaps configured by the serving eNode B.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.4.12 and A.8.18.1.

8.18.1.4 Test description

8.18.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.23.
- 2. The general test parameter settings are set up according to Table 8.18.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.18.1.4.3.
- 5. There is one E-UTRA TDD serving cell and one HRPD cell specified in the test. Cell 1 (E-UTRA TDD cell) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.18.1.4.1-1: General test parameters for E-UTRAN TDD to HRPD event triggered reporting under fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 TDD	As specified in section A.1.2
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement Channel R.6 TDD	As specified in section A.2.2
Active cell		Cell 1	E-UTRAN TDD cell
Neighbouring cell		Cell 2	HRPD cell
Gap Pattern Id		1	As specified in 3GPP TS 36.133 section 8.1.2.1.
E-UTRAN TDD measurement quantity		RSRP	
Inter-RAT (HRPD) measurement		CDMA2000 HRPD Pilot	
quantity		Strength	
b1-ThresholdCDMA2000	dB	-7	Absolute 'CDMA2000 HRPD Pilot Strength' threshold for event B1
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	Non-DRX test
Access Barring Information	-	Notsent	No additional delays in random access procedure
E-UTRARF Channel Number		1	One E-UTRATDD carrier frequency is used.
E-UTRA Channel Bandwidth (BW _{channel})	MHz	10	
Uplink-downlink configuration of cell 1		1	As specified in table 4.2.2 in TS 36.211
Special subframe configuration of cell 1		6	As specified in table 4.2.1 in TS 36.211
HRPD RF Channel Number		1	One HRPD carrier frequency is used.
HRPD neighbour cell list size		8	HRPD cells on HRPD RF channel 1 provided in the cell list before T2.
cdma2000-SearchWindowSize		8 (60 PN chips)	Search window size as defined in section 6.3.5 in 3GPP TS 36.331
T1	S	5	
T2	S	3	

8.18.1.4.2 Test procedure

The test consists of one active cell and one neighbour cell. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 2.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to T1 in Tables 8.18.1.5-1 and 8.18.1.5-2. Propagation conditions are set according to Annex B clause B.1.1 and B.2.2. T1 starts.
- 3. The neighbour cell shall broadcast its own PN offset and the measurement cell list of Cell 1 shall contain the PN offset of Cell 2. SS shall transmit an RRCConnectionReconfiguration message.
- $4. \ The \ UE \ shall \ transmit \ RRCConnection Reconfiguration Complete \ message.$
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Tables 8.19.1.5-1 and 8.19.1.5-2.
- 6. UE shall transmit a Measure mentReport message triggered by Event B1. If the measure ment reporting delay measured from the beginning of time period T2 is less than 2136 ms then the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.

- 7. After the SS receive the MeasurementReport message in step 6) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 8. The SS shall set a different PN Offset on Cell 2, as the previous timing information of Cell 2 is invalid in the UE for the next iteration of the test procedure loop.
- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.18.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.18.1.4.3-1: Common Exception messages for E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Default Message Contents				
Common contents of system information blocks exceptions				
	Table H.3.1-1 Table H.3.1-7			

Table 8.18.1.4.3-2: *MeasConfig-DEFAULT*: Additional E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:					
Information Element	Value/remark	Comment	Condition		
MeasConfig-DEFAULT ::= SEQUENCE {					
meas ObjectToRemoveList	Not present				
measObjectToAddModList SEQUENCE (SIZE	2 entry				
(1maxObjectId)) OF SEQUENCE {					
MeasObjectToAddMod SEQUENCE {					
meas ObjectId	IdMeasObject-f1	f1 is the frequency			
		of the serving			
		cell(E-UTRA Cell)			
measObject CHOICE {					
meas ObjectEUTRA	MeasObjectEUTRA-	E-UTRA Cell			
	GENERIC(f1)				
}					
}					
MeasObjectToAddMod SEQUENCE {					
meas ObjectId	IdMeasObject-f14	f14 is the frequency			
		of the neighbouring			
		cell(CDMA2000			
mana Ohiant CHOICE (Cell)			
measObject CHOICE {	Mar Obi + OD MAGGOO	ODM40000 O-II			
measObjectCDMA2000	MeasObjectCDMA2000	CDMA2000 Cell			
}					
}					
}	Network				
reportConfigToRemoveList reportConfigToAddModList SEQUENCE (SIZE	Not present				
	1 entry				
(1maxReportConfigId)) OF SEQUENCE { reportConfigId	idReportConfig-B1				
reportConfig	ReportConfigInterRAT-B1-				
reportConing	CDMA2000				
1	CDIVIAZUUU				
measIdToRemoveList	Notorogont				
measIdToAddModList SEQUENCE (SIZE	Not present 1 entry				
(1maxMeasId)) OF SEQUENCE {	i entry				
measId	1				
meas ObjectId	IdMeasObject-f14				
reportConfigld	IdReportConfig-B1				
1 eportooningia	iditepolicolliig-bi				
quantityConfig	QuantityConfig-DEFAULT		CDMA2000		
meas GapConfig	MeasGapConfig-GP2		Gap Pattern		
inteas GapConnig			ld = 1		
s-Measure	Not present				
preRegistrationInfoHRPD	Not present				
speedStatePars	Not present				
}					

Table 8.18.1.4.3-3: ReportConfigInterRAT-B1-CDMA2000: Additional E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
ReportConfigInterRAT-B1-CDMA2000(CDMA2000-			
Thres) ::= SEQUENCE {			
triggerType CHOICE {			
e vent SEQUENCE {			
e ventld CHOICE {			
eventB1 SEQUENCE {			
b1-Threshold CHOICE {			
b1-ThresholdCDMA2000 CHOICE {			
ThresholdCDMA2000	14(-7)	-2*10*log10(Ec/lo) in units of 0.5dB, see C.S0005-A for details	
}			
}			
}			
}			
hysteresis	0		
}			
}			
}			

Table 8.18.1.4.3-4: *MeasResults*: Additional E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
MeasResultNeighCells CHOICE {			
meas Results CDMA2000	Meas Results CDMA2000		
}			
}			

Table 8.18.1.4.3-5: *MeasResultsCDMA2000*: Additional E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Information Element	Value/remark	Comment	Condition
MeasResultsCDMA2000::= SEQUENCE {			
preRegistrationStatusHRPD	true		
meas ResultListCDMA2000	Meas ResultListCDMA200 0		

Table 8.18.1.4.3-6: MeasResultListCDMA2000: Additional E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListCDMA2000::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellIdCDMA2000		
meas Result SEQUENCE {			
pilotStrength	6(-3)	-2*10*log10(Ec/lo) in units of 0.5dB, see C.S0005-A for details	
}			
}			

8.18.1.5 Test requirement

Tables 8.18.1.4.1-1, 8.18.1.5-1 and 8.18.1.5-2 define the primary level settings including test tolerances for E-UTRAN TDD - HRPD event triggered reporting under fading propagation conditions test.

Table 8.18.1.5-1: Cell specific test parameters for E-UTRAN TDD cell#1 for event triggered reporting under fading propagation conditions

Parameter	Unit	Cell 1 (E-UTRA)	
		T1	T2
E-UTRARF Channel		1	
number			
BW _{channel}	MHz	1	
OCNG Patterns defined in		OP.1	TDD
D.2.1 (OP.1 TDD)			
PBCH_RA	dB		
PBCH_RB	dB		
PSS_RA	dB		
SSS_RA	dB		
PCFICH_RB	dB		
PHICH_RA	dB		
PHICH_RB	dB	C)
PDCCH_RA	dB		
PDCCH_RB	dB		
PDSCH_RA	dB		
PDSCH_RB	dB		
OCNG_RANGE 1	dB		
OCNG_RB ^{Note 1}	dB		
$N_{oc}^{ m Note~2}$	dBm/15	-9	8
	kHz		
RSRP Note 3	dBm/15	-98 +TT	-98+TT
	KHz		
\hat{E}_s/N_{oc}	dB	0	0
\hat{E}_s/I_{ot}	dB	0+TT	0+TT
Propagation Condition		ETU	
		ooth cells are fully a	
constant total transmitted power spectral density is achieved for all OFDM symbols. Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall			
be modelled as AV	VGN of appro	priate power for $N_{ m c}$	$_{oc}$ to be fulfilled.
		from other parame not settable parame	

Table 8.18.1.5-2: Cell specific test parameters for HRPD (cell # 2) for event triggered reporting under fading propagation conditions

Parameter	Unit	Cell 2	(HRPD)
		T1	T2
$\frac{\text{Control } E_b}{N_t} \text{ (38.4 kbps)}$	dB	2	21
$\frac{\text{Control } E_b}{N_t} \text{ (76.8 kbps)}$	dB	1	8
\hat{I}_{or}/I_{oc}	dB	-infinity	0
I_{oc}	dBm/1.2288 MHz		55
CDMA2000 HRPD Pilot Strength	dB	-infinity	-3+TT
Propagation Condition		ET	U70

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event B1 triggered measurement report to Cell 2.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

 $Measurement\ reporting\ delay = T_{measurement_HRPD} = T_{measurement_CDMA2000_1x}$

$$\mathbf{T}_{\text{measurement_CDMA2000_1x}} = \mathbf{T}_{\text{basic_measurement_CDMA2000_k}} \cdot N_{\textit{Freq}} \cdot S_{\textit{gap}}$$

 $T_{basic_identify_UTRA_TDD} = 100 \ ms$

 $N_{Freq} = 1$

 $S_{gap} = 64/3$

TTI insertion uncertainty = 2 ms

The overall delays measured shall be less than a total of 2136 ms in this test case (note: this gives a total of 2134 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

8.19.1 E-UTRAN TDD-CDMA2000 1X event triggered reporting under fading propagation conditions

Editor's note: This section is incomplete. The following aspects are either missing or not yet determined:

- The Test system uncertainties applicable to this test are undefined
- The Test tolerances applicable to this test are undefined

8.19.1.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions within the E-UTRA TDD-CDMA2000 1X inter-frequency cell search requirements.

8.19.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 9 and forward that support cdma2000 1xRTT. Applicability requires support for FGI bit 15.

8.19.1.3 Minimum conformance requirements

When measurement gaps are scheduled for CDMA2000 1xRTT inter RAT measurements, or the UE supports capability of conducting such measurements without gaps, the UE physical layer shall be capable of reporting CDMA2000 1xRTT Pilot Strength measurements to higher layers with measurement accuracy as specified in TS36.133 [4] Section 9.5, corresponding to a 90% measurement success rate, with measurement period given by

$$\mathbf{T}_{\text{measurement_CDMA2000_1x}} = \mathbf{T}_{\text{basic_measurement_CDMA2000_k}} \cdot N_{\textit{Freq}} \cdot S_{\textit{gap}}$$

where $T_{basic_measurement_CDMA2000_1x} = 100$ ms and the measurement gap specific scale factor S_{gap} is based on the measurement gap pattern in use as defined in Table 8.19.1.3-1. If inter-frequency RSTD measurements are configured as a part of the measurement configuration, S_{gap} shall be based to the Gap Pattern Id 1.

Table 8.19.1.3-1: Gap Pattern Specific Scale Factor

Gap Pattern Id	S_gap
0	32/3
1	64/3

Reported measurements in periodically triggered measurement reports shall meet the requirements in TS 36.133 [4] section 9.

The measurement reporting delay of each periodic report is defined as the time between the end of the last measurement period and the moment when the UE starts to transmit the measurement report over the Uu interface. This delay shall be less than T_{71m} defined in 3GPP2 C.S0005-D for each periodic report. This measurement reporting delay excludes a delay which is caused by the unavailability of the uplink resources for the UE to send the measurement report.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.4.10 and A.8.19.1.

8.19.1.4 Test description

8.19.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.23.
- 2. The general test parameter settings are set up according to Table 8.19.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.19.1.4.3.
- 5. There is one E-UTRA FDD serving cell and one cdma 2000 1xRTT cell specified in the test. Cell 1 (E-UTRA FDD cell) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 8.19.1.4.1-1: General test parameters for E-UTRAN TDD-CDMA2000 1X event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters (E-UTRAN TDD)		DL Reference Measurement Channel R.0 TDD	As specified in section A.1.2.
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement	As specified in section A.2.2
(E-UTRAN TDD)		Channel R.6 TDD	
Gap Pattern Id		1	As specified in 3GPP TS 36.133 section 8.1.2.1.
Active cell		Cell 1	Cell 1 is on E-UTRARF channel number 1.
Neighbour cell		Cell 2	Cell 2 is on CDMA2000 1X RF channel number 1.
Special subframe configuration		6	As specified in table 4.2-1 in 3GPP TS 36.211. Applicable to cell 1.
Uplink-downlink configuration		1	As specified in table 4.2-2 in 3GPP TS 36.211. Applicable to cell 1.
CP length		Nomal	Applicable to cell 1.
E-UTRARF Channel Number		1	One E-UTRATDD carrier frequency is used.
E-UTRA Channel Bandwidth (BW _{channel})	MHz	10	
CDMA2000 1X Channel Number		1	One CDMA2000 1X carrier frequency is used.
Inter-RAT (CDMA2000 1X) measurement quantity		CDMA2000 1xRTT Pilot Strength	
B1-Threshold-CDMA2000	dB	-14	Absolute 'CDMA2000 1xRTT Pilot Strength' threshold for event B1
Hysteresis	dB	0	
Time To Trigger	ms	0	
Filter coefficient		0	L3 filtering is not used.
DRX		OFF	
cdma2000 1X neighbour cell list size		8	cdma2000 1X cells on cdma2000 1X RF channel 1 provided in the cell list before T2.
cdma2000-SearchWindowSize		8 (60 PN chips)	Search window size as defined in section 6.3.5 in 3GPP TS 36.331
T1	S	5	
T2	S	3	

8.19.1.4.2 Test procedure

The test consists of one active cell and one neighbour cell. In the measurement control information it is indicated to the UE that event-triggered reporting with Event B1 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of cell 2.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3. Cell 1 is the active cell.
- 2. Set the parameters according to T1 in Tables 8.19.1.5-1 and 8.19.1.5-2. Propagation conditions are set according to Annex B clause B.1.1 and B.2.2. T1 starts.
- 3. The neighbour cell shall broadcast its own PN offset and the measurement cell list of Cell 1 shall contain the PN offset of Cell 2. The SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Tables 8.19.1.5-1 and 8.19.1.5-2.
- 6. The UE shall transmit a MeasurementReport message triggered by Event B1. If the measurement reporting delay measured from the beginning of time period T2 is less than 2136 ms then the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.

- 7. After the SS receives the MeasurementReport message in step 6) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 8. The SS shall set a different PN Offset on Cell 2, as the previous timing information of Cell 2 is invalid in the UE for the next iteration of the test procedure loop.
- 9. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 10. Repeat step 2-9 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.19.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.19.1.4.3-1: Common Exception messages for E-UTRAN TDD – CDMA 2000 1X event triggered reporting under fading propagation conditions

Default Message Contents			
Common contents of system information			
blocks exceptions			
	Table H.3.1-1		
elements contents exceptions	Table H.3.1-7		

Table 8.18.1.4.3-2: *MeasConfig-DEFAULT*: Additional E-UTRAN TDD – CDMA2000 1X event triggered reporting under fading propagation conditions

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	I.6.6-1 MeasConfig-DEFAULT	:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {	-		
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	ldMeasObject-f1	f1 is the frequency of the serving cell(E-UTRA Cell)	
measObject CHOICE {			
measObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f17	f17 is the frequency of the neighbouring cell(CDMA2000 Cell)	
measObject CHOICE {			
measObjectCDMA2000	MeasObjectCDMA2000	CDMA2000 Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	1 entry		
reportConfigId	idReportConfig-B1		
reportConfig	ReportConfigInterRAT- B1-CDMA2000		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) OF SEQUENCE {			
measId	1		ļ
meas ObjectId	IdMeasObject-f17		
reportConfigld	IdReportConfig-B1		ļ
<u> </u>			001440000
quantityConfig	QuantityConfig- DEFAULT		CDMA2000
meas GapConfig	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

Table 8.19.1.4.3-3: ReportConfigInterRAT-B1-CDMA2000: Additional E-UTRAN TDD - CDMA2000 1X event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
ReportConfigInterRAT-B1-CDMA2000 (CDMA2000-			
Thres) ::= SEQUENCE {			
triggerType CHOICE {			
e vent SEQUENCE {			
e ventld CHOICE {			
eventB1 SEQUENCE {			
b1-Threshold CHOICE {			
b1-Threshold CDMA2000	28(-14)	INTEGER (063)	CDMA2000
}			
}			
}			
hysteresis	0 (0dB)	The actual value is	
		IE value * 0.5 dB.	
timeToTrigger	ms0		
}			
}			
}			

Table 8.19.1.4.3-4: *MeasResults*: Additional E-UTRAN TDD – CDMA2000 1X event triggered reporting under fading propagation conditions

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultPCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultsCDMA2000	Meas Results CDMA2000		
}			

Table 8.19.1.4.3-5: MeasResultsCDMA2000: Additional E-UTRAN TDD - CDMA 2000 1X event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultsCDMA2000::= SEQUENCE (
preRegistrationStatusHRPD	FALSE		
meas ResultListCDMA2000	MeasResultListCDMA2000		
}			

Table 8.19.1.4.3-6: MeasResultListCDMA2000: Additional E-UTRAN TDD - CDMA2000 1X event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListCDMA2000::= SEQUENCE (SIZE (1maxCellReport)) OF MeasResultCDMA2000 {			
MeasResultCDMA2000 ::= SEQUENCE {			
phys CellId	Phys CellIdCDMA2000		
measResult ::= SEQUENCE {			
pilotStrength	20 (-10)	INTEGER (063)	
}			
}			
}			

8.19.1.5 Test requirement

Tables 8.19.1.4.1-1, 8.19.1.5-1 and 8.19.1.5-2 define the primary level settings including test tolerances for E-UTRAN TDD-CDMA 2000 1X event triggered reporting under fading propagation conditions.

Table 8.19.1.5-1: Cell specific test parameters for E-UTRAN TDD (cell # 1) for event triggered reporting of CDM A2000 1X cell under fading propagation conditions

Parameter	Unit	Cell	1		
		T1	T2		
E-UTRARF Channel Number		1	•		
BW _{channel}	MHz	10			
OCNG Pattern defined in		OP.1 ⁻	TDD		
D.2.1 (OP.1 TDD)		OP.1	וטט		
PBCH_RA	dB				
PBCH_RB	dB				
PSS_RA	dB				
SSS_RA	dB				
PCFICH_RB	dB				
PHICH_RA	dB				
PHICH_RB	dB	0			
PDCCH_RA	dB				
PDCCH_RB	dB				
PDSCH_RA	dB				
PDSCH_RB	dB				
OCNG_RA ^{NOTE 1}	dB				
OCNG_RB ^{Note 1}	dB				
\hat{E}_{s}/I_{ot}	dB	4+TT	4+TT		
\hat{E}_s/N_{oc}	dB	4	4		
N_{oc}	dBm/15 kHz	-98	3		
RSRP	dBm/15 kHz	-94+TT	-94+TT		
SCH_RP	dBm/15 kHz	-94+TT	-94+TT		
Propagation Condition		ETU	70		

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

-55

ETU70

-10+TT

-infinity

Cell 2 (cdma2000 1X) Parameter Unit Pilot E_c dΒ -7 Sync E_c dB -16 Paging E_c (4.8 kbps) dΒ -12 0 -infinity \hat{I}_{or}/I_{oc} dΒ

dBm/1.2288

MHz

dB

Table 8.19.1.5-2: Cell specific test parameters for CDMA2000 1X (cell # 2) for event triggered reporting of CDMA2000 1X cell under fading propagation conditions

The overall delay measured is defined as the time from the beginning of time period T2, to the moment the UE sends one Event B1 triggered measurement report including PN offset of Cell 2.

The actual overall delays measured in the test may be up to 2xTTIDCCH higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

CDMA2000 1xRTT Pilot

Propagation Condition

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

 $Measurement\ reporting\ delay=\ T_{measurement_CDMA2000_1x}$

 $T_{\text{measurement CDMA2000 1x}} = T_{\text{basic measurement CDMA2000 k}} \cdot N_{Freq} \cdot S_{gap}$

 $T_{basic_measurement_CDMA2000_1x} = 100 \ ms \, .$

 I_{oc}

Strength

 $N_{Freq} = 1$. It is defined in TS 36.133 [4] clause 8.1.2.1.1.

 S_{gap} =64/3. It is based on the measurement gap pattern in use as defined in Table 8.19.1.3-1.

TTI insertion uncertainty = 2 ms

The overall delays measured shall be less than a total of 2136 ms in this test case (note: this gives a total of 2134 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

8.20 Inter-frequency/RAT Measurements in CA mode

8.20.1 E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The Test Tolerances are undefined

8.20.1.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions in asynchronous cells within the E-UTRA FDD inter-frequency cell search requirements in CA mode. This test will partly verify the FDD-FDD inter-frequency cell search requirements.

8.20.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward that support CA.

8.20.1.3 Minimum conformance requirements

When measurement gaps are scheduled the UE shall be able to identify a new FDD inter-frequency within $T_{Identify_Inter}$ according to the following expression:

$$T_{\text{Identify_Inter}} = T_{\text{Basic_Identify_Inter}} \cdot \frac{480}{T_{\text{Interl}}} \cdot N_{\text{freq}} \quad \textit{ms}$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new FDD inter-frequency cell is defined.

 N_{freq} is defined in TS 36.133 [4] section 8.1.2.1.1 and T_{Interl} is defined in TS 36.133 [4] section 8.1.2.1.

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP £s/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in Sections 9.1.3.1 and 9.1.3.2 and RSRQ related side conditions given in Sections 9.1.6.1 and 9.1.6.2 are fulfilled,
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

When measurement gaps are scheduled for FDD inter frequency measurements the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with measurement accuracy as specified in TS 36.133 sub-clauses 9.1.3.1, 9.1.3.2, 9.1.6.1, and 9.1.6.2, respectively, with measurement period given by table 8.20.1.3-1.

Table 8.20.1.3-1: Measurement period and measurement bandwidth

Configuration	Physical Layer Measurement period: T _{Measurement_Period_Inter_FDD} [ms]	Measurement bandwidth [RB]
0	480 x N _{freq}	6
1 (Note)	240 x N _{freq}	50
Note: This conf	guration is optional.	

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per FDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with the measurement period defined in Table 8.20.1.3-1.

Reported RSRP and RSRQ measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clauses 9.1.3.1, 9.1.3.2, 9.1.6.1, and 9.1.6.2, respectively.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: $2 \times TTI_{DCCH}$. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T _{identify_inter} defined in TS 36.133 [4] clause 8.1.2.3.1.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.2.1.1 becomes undetectable for a period ≤ 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period_Intra}$ provided the timing to that cell has

not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.1 and A.8.20.1.

8.20.1.4 Test description

8.20.1.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.43 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.20.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.20.1.4.3.
- 5. There are three E-UTRA FDD carriers and three cells specified in the test. Cell 1 is the PCell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 is the inter-frequency neighbour cell, Cell 3 is the SCell. Cell 2 and Cell 3 shall be powered OFF.

Table 8.20.1.4.1-1: General test parameters for E-UTRAN FDD-FDD inter-frequency event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement	As specified in section A.1.1
		Channel R.0 FDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.6 FDD	
E-UTRA RF Channel		1, 2	Two FDD carrier frequencies are used.
Number			
E-UTRA RF Channel		3	One FDD carrier frequencies is used
Number for SCell			
Channel Bandwidth	MHz	10	
(BW _{channel})			
Active cell		Cell 1	Cell 1 is on RF channel number 1
Neighbour cell		Cell 2	Cell 2 is on RF channel number 2
Configured active SCell		Cell 3	Cell 3 is on RF channel number 3
Gap Pattern Id		0	As specified in 3GPP TS 36.133 section
			8.1.2.1.
A3-Offset	dB	-6	
Hysteresis	dB	0	
CP length		Nomal	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF
Cell2 timing offset to cell1	ms	3	Asynchronous cells
Cell3 timing offset to cell1	μS	0	Synchronous cells
Time alignment error	μS	≤ Time alignment error as	The value of time alignment error depends
between cell3 and cell1	1	specified in 3GPP TS 36.104 [30]	upon the type of carrier aggregation.
		clause 6.5.3.1.	
T1	S	5	
T2	S	5	

8.20.1.4.2 Test procedure

The test consists of two successive time periods, with time duration of T1, and T2 respectively. During time duration T1, the UE shall not have any timing information of cell 2.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all downlink physical channels except PHICH.
- 3 The SS shall configure the SCell (Cell 3) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.20.1.4.3.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133, clauses 8.3.3.2).
- 5. Set the parameters according to T1 in Table 8.20.1.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 6. The SS shall transmit an RRCConnectionReconfiguration message with event A3 configured.
- 7. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 8. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.20.1.5-1.
- 9. UE shall transmit a MeasurementReport message triggered by Event A3. If the measurement reporting delay from the beginning of time period T2 is less than 3842ms the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.
- 10. After the SS receives the MeasurementReport message in step 9) or when T2 expires, the SS shall transmit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 11. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 12. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 13. Repeat steps 2-12 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.20.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.20.1.4.3-1: Common Exception messages for E-UTRAN FDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			

Table 8.20.1.4.3-2: *MeasConfig:* E-UTRAN FDD-FDD inter frequency event triggered reporting under fading propagation conditions in asynchronous cells test requirements

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1			
Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectId)) OF SEQUENCE {			
measObjectId[1]	IdMeasObject-f1		
measObject[1]	MeasObjectEUTRA-	Cell 1	
	GENERIC(f1)		
measObjectId[2]	IdMeasObject-f2		
measObject[2]	MeasObjectEUTRA-	Cell 2	
	GENERIC(f2)		
measObjectId[3]	IdMeasObject-f3		
measObject[3]	MeasObjectEUTRA-	Cell 3	
	GENERIC(f3)		
}			
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId)) OF SEQUENCE {	-		
reportConfigId[1]	IdReportConfig-A3		
reportConfig[1]	ReportConfigEUTRA-A3		
}			
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) OF SEQUENCE {	,		
measId[1]	1		
measObjectId[1]	IdMeasObject-f2		
reportConfigId[1]	IdReportConfig-A3		
}			
meas GapConfig	MeasGapConfig-GP1		Gap
. .			Pattern Id
			= 0
}			

Table 8.20.1.4.3-3: ReportConfigEUTRA-A 3: Additional E-UTRAN FDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Tabl	e 4.6.6-6 ReportConfigEUTRA	-A3		
Information Element	Value/remark	Comment	Condition	
ReportConfigEUTRA-A3 ::= SEQUENCE {				
triggerType CHOICE {				
event SEQUENCE {				
eventld CHOICE {				
eventA3 SEQUENCE {				
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)		
reportOnLeave	FALSE			
}				
Hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)		
timeToTrigger	0 (0 ms)			
}				
}				

Table 8.20.1.4.3-4: MeasurementReport: Additional E-UTRAN FDD-FDD inter frequency event triggered reporting under fading propagation conditions in a synchronous cells test requirement

Derivation path: 36.508 4.6.1 table 4.6.1-5				
Information Element	Value/Remark	Comment	Condition	
MeasurementReport ::= SEQUENCE {				
criticalExtensions CHOICE {				
c1 CHOICE {				
measurementReport-r8 SEQUENCE {				
measResults ::= SEQUENCE {				
measld	1			
measResultPCell::= SEQUENCE {		PCell		
rsrpResult	(097)	Set according to specific test		
rsrqResult	(034)	Set according to specific test		
}				
measResultNeighCells CHOICE {				
MeasResultEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {		Neighbour cell		
physCellId	physCellId of Cell 2			
cgi-Info	Not present			
meas Result SEQUENCE {				
rsrpResult	(097)	Set according to		
•	,	specific test		
rsrqResult	(034)	Set according to		
·		specific test		
}		·		
}				
}				
measResultForECID-r9	Not present			
locationInfo-r10	Not present			
measResultServFreqList-r10 SEQUENCE				
(SIZE (1maxServCell-r10)) OF SEQUENCE {				
servFreqId-r10	1			
measResultSCell-r10 SEQUENCE {		SCell		
rsrpResultSCell-r10	(097)	Set according to		
	(6.16.1)	specific test		
rsrqResultSCell-r10	(034)	Set according to		
1014110001100011110	(6.16.1)	specific test		
}		1		
}				
}				
}				
}				
}			+	
J	İ	1	1	

8.20.1.5 Test requirement

Tables 8.20.1.4.1-1 and 8.20.1.5-1 define the primary level settings including test tolerances for event triggered reporting under fading propagation conditions in asynchronous inter frequency cells test.

Table 8.20.1.5-1: Cell specific test parameters for E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in synchronous cells

Parameter	Unit	Се	Cell 1 Cell 2 Cell 3				
		T1 T2		T1 T2		T1	T2
E-UTRARF		1		2		3	
Channel Number							_
BW _{channel}	MHz	1	0		10	1	0
OCNG Patterns							
defined in D.1.1		OP.1	FDD	OP.	2 FDD	OP.1	FDD
(OP.1 FDD) and in							
D.1.2 (OP.2 FDD)	I.D.						
PBCH_RA	dB						
PBCH_RB	dB						
PSS_RA	dB						
SSS_RA	dB						
PCFICH_RB	dB						
PHICH_RA	dB						
PHICH_RB	dB	()	0		0	
PDCCH_RA	dB						
PDCCH_RB	dB						
PDSCH_RA	dB						
PDSCH_RB	dB						
OCNG_RA ^{Note 1}	dB						
OCNG_RB ^{Note 1}	dB						
$N_{oc}^{ m Note 3}$	dBm/15 kHz				-98		
RSRP Note 4	dBm/15 kHz	-94 + TT	-94 + TT	-Infinity	-91 +TT	-94 +TT	-94 + TT
\hat{E}_{s}/I_{ot}	dB	4 + TT	4 + TT	-Infinity	7 +TT	4 +TT	4 + TT
SCH_RP Note 4	dBm/15 kHz	-94 + TT	-94 + TT	-Infinity	-91 +TT	-94 +TT	-94 + TT
\hat{E}_s/N_{oc}	dB	4 + TT 4 +TT		-Infinity	7 +TT	4 + TT	4 + TT
Propagation Condition		ETU70					

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A3 triggered measurement report, with a measurement reporting delay less than 3842 ms from the beginning of time period T2.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event A3 triggered measurement report to Cell 2.

The overall delays measured in the test may be up to $2xTTI_{DCCH}$ higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = 3840 ms

TTI insertion uncertainty = $TTI_{DCCH} = 1$ ms; $2xTTI_{DCCH} = 2$ ms

The overall delays measured shall be less than a total of 3842 ms in this test case (note: this gives a total of 3840 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

NOTE: The actual overall delays measured in the test may be up to $2xTTI_{DCCH}$ higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

8.20.2 E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The Test Tolerances are undefined

8.20.2.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions in asynchronous cells within the E-UTRA TDD inter-frequency cell search requirements in CA mode. This test will partly verify the TDD-TDD inter-frequency cell search requirements.

8.20.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward that support CA.

8.20.2.3 Minimum conformance requirements

When measurement gaps are scheduled the UE shall be able to identify a new TDD inter-frequency within $T_{Identify_Inter}$ according to the following expression:

$$\mathbf{T}_{\mathrm{Identify_Inter}} = \mathbf{T}_{\mathrm{Basic_Identify_Inter}} \cdot \frac{480}{\mathbf{T}_{\mathrm{Interl}}} \cdot N_{\mathit{freq}} \quad \mathit{ms}$$

Where:

 $T_{Basic_klentify_Inter} = 480 \text{ ms.}$ It is the time period used in the inter frequency equation where the maximum allowed time for the UE to identify a new TDD inter-frequency cell is defined.

 N_{freq} is defined in TS 36.133 [4] section 8.1.2.1.1 and T_{Interl} is defined in TS36.133 [4] section 8.1.2.1.

A cell shall be considered detectable provided following conditions are fulfilled:

- RSRP and RSRP £s/Iot according to Annex I.2.3 for a corresponding Band,
- other RSRP related side conditions given in Sections 9.1.3.1 and 9.1.3.2 and RSRQ related side conditions given in Sections 9.1.6.1 and 9.1.6.2 are fulfilled,
- SCH_RP|_{dBm} and SCH Ês/Iot according to Annex I.2.3 for a corresponding Band.

When measurement gaps are scheduled for TDD inter frequency measurements the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with measurement accuracy as specified in TS 36.133 sub-clauses 9.1.3.1, 9.1.3.2, 9.1.6.1, and 9.1.6.2, respectively, with measurement period given by table 8.20.1.3-1.

Table 8.20.2.3-1: Measurement period and measurement bandwidth

Configuration	Measurement bandwidth	Number of UL/DL sub-frames per half frame (5 ms)		DwF	PTS	T _{Measurement_Period_TDD_I}
	[RB]	DL	UL	Nomal CP	Extended CP	
0	6	2	2	$19760 \cdot T_{\rm s}$	$20480 \cdot T_{\rm s}$	480 x N _{freq}
1 (Note 1)	50	2	2	$19760 \cdot T_{\rm s}$	$20480 \cdot T_{\rm s}$	240 x N _{freq}

Note 1: This configuration is optional.

Note 2: T_s is defined in 3GPP TS 36.211 [9].

The UE shall be capable of performing RSRP and RSRQ measurements of at least 4 inter-frequency cells per TDD inter-frequency and the UE physical layer shall be capable of reporting RSRP and RSRQ measurements to higher layers with the measurement period $T_{Measurement_Period_TDD_Inter}$.

Reported RSRP and RSRQ measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clauses 9.1.3.1, 9.1.3.2, 9.1.6.1, and 9.1.6.2, respectively.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between an event that will trigger a measurement report and the point when the UE starts to transmit the measurement report over the air interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: 2 x TTI_{DCCH}. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T _{identify_inter} defined in TS 36.133 [4] clause 8.1.2.3.1.1. When L3 filtering is used an additional delay can be expected.

If a cell which has been detectable at least for the time period $T_{identify_intra}$ defined in TS 36.133 [4] section 8.1.2.2.1.1 becomes undetectable for a period \leq 5 seconds and then the cell becomes detectable again and triggers an event, the event triggered measurement reporting delay shall be less than $T_{Measurement_Period\ Intra}$ provided the timing to that cell has not changed more than \pm 50 Ts and the L3 filter has not been used. When L3 filtering is used an additional delay can be expected

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.3.2 and A.8.20.2.

8.20.2.4 Test description

8.20.2.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node Bemulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.43 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.20.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.20.2.4.3.
- 5. There are three E-UTRA TDD carriers and three cells specified in the test. Cell 1 is the PCell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 is the inter-frequency neighbour cell, Cell 3 is the SCell. Cell 2 and Cell 3 shall be powered OFF.

Table 8.20.2.4.1-1: General test parameters for E-UTRAN TDD-TDD inter-frequency event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 TDD	As specified in section A.1.2
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement Channel R.6 TDD	As specified in section A.2.2
Gap Pattern Id		1	As specified in 3GPP TS 36.133 section 8.1.2.1.
Special subframe configuration		6	As specified in table 4.2-1 in TS 36.211. The same configuration in both cells
Uplink-downlink configuration		1	As specified in 3GPP TS 36.211 section 4.2 Table 4.2-2
CP length		Nomal	
E-UTRARF Channel Number		1, 2	Two TDD carrier frequencies are used.
E-UTRARF Channel Number for SCell		3	One TDD carrier frequencies is used
Channel Bandwidth (BW _{channel})	MHz	10	
Active cell		Cell 1	Cell 1 is on RF channel number 1
Neighbour cell		Cell 2	Cell 2 is on RF channel number 2
Configured active SCell		Cell 3	Cell 3 is on RF channel number 3
A3-Offset	dB	-6	
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
Time offset between cells		3 μs	Synchronous cells
T1	s	5	
T2	S	10	

8.20.2.4.2 Test procedure

The test consists of two successive time periods, with time duration of T1, and T2 respectively. During time duration T1, the UE shall not have any timing information of cell 2

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all downlink physical channels except PHICH.
- 3 The SS shall configure the SCell (Cell 3) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.20.2.4.3.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133, clauses 8.3.3.2).
- 5. Set the parameters according to T1 in Table 8.20.2.5-1. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 6. The SS shall transmit an RRCConnectionReconfiguration message with event A3 configured.
- 7. The UE shall transmit an RRCConnectionReconfigurationComplete message.
- 8. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table 8.20.2.5-1.
- 9. UE shall transmit a MeasurementReport message triggered by Event A3. If the measurement reporting delay from the beginning of time period T2 is less than 7682ms the number of successful tests is increased by one. If the UE fails to report the event within the measurement reporting delay requirement then the number of failure tests is increased by one.
- 10. After the SS receives the MeasurementReport message in step 9) or when T2 expires, the SS shall transmit a RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.

- 11. Set Cell 2 physical cell identity = ((current cell 2 physical cell identity + 1) mod 14 + 2) for next iteration of the test procedure loop.
- 12. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with UE-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 13. Repeat steps 2-12 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.20.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.20.2.4.3-1: Common Exception messages for E-UTRAN TDD-TDD inter frequency event triggered reporting under fading propagation conditions in synchronous cells test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
·	Table H.4.1-5			

Table 8.20.2.4.3-2: *MeasConfig:* E-UTRAN TDD-TDD inter frequency event triggered reporting under fading propagation conditions in synchronous cells test requirements

Derivation path: 36.508 clause 4.6.6 table 4.6.6-1			
Information Element	Value/Remark	Comment	Condition
MeasConfig ::= SEQUENCE {			
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectId)) OF SEQUENCE {			
measObjectId[1]	IdMeasObject-f1		
measObject[1]	MeasObjectEUTRA-	Cell 1	
	GENERIC(f1)		
measObjectId[2]	IdMeasObject-f2		
measObject[2]	MeasObjectEUTRA-	Cell 2	
	GENERIC(f2)		
measObjectId[3]	IdMeasObject-f3		
measObject[3]	MeasObjectEUTRA-	Cell 3	
,	GENERIC(f3)		
}			
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId)) OF SEQUENCE {			
reportConfigId[1]	IdReportConfig-A3		
reportConfig[1]	ReportConfigEUTRA-A3		
}			
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) OF SEQUENCE {	•		
measId[1]	1		
measObjectId[1]	IdMeasObject-f2		
reportConfigId[1]	IdReportConfig-A3		
}	, ,		
meas GapConfig	MeasGapConfig-GP2		Gap
. •			Pattern Id
			= 1
}			

Table 8.20.2.4.3-3: ReportConfigEUTRA-A 3: Additional E-UTRAN TDD-TDD inter frequency event triggered reporting under fading propagation conditions in synchronous cells test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Tab	le 4.6.6-6 ReportConfigEUTRA	-A3	
Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventId CHOICE {			
eventA3 SEQUENCE {			
a3-Offset	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)	
reportOnLeave	FALSE		
}			
Hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
timeToTrigger	0 (0 ms)		
}			
}			

8.20.2.5 Test requirement

Tables 8.20.2.4.1-1 and 8.20.2.5-1 define the primary level settings including test tolerances for event triggered reporting under fading propagation conditions in asynchronous inter frequency cells test.

Table 8.20.2.5-1: Cell specific test parameters for E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in synchronous cells

Parameter	Unit	Cell 1 Cell 2		Cell	3			
		T1	T2	T1	T2	T1	T2	
E-UTRARF		1			2	3		
Channel Number								
BW _{channel}	MHz	10)		10	10		
OCNG Pattern defined in D.2.1 (OP.1 TDD) and in		OP.1	TDD	OP.	2 TDD	OP.1 1	TDD	
D.2.2 (OP.2)								
PBCH_RA	dB							
PBCH_RB	dB				<u> </u>			
PSS_RA	dB							
SSS_RA	dB							
PCFICH_RB	dB							
PHICH_RA	dB							
PHICH_RB	dB	0			0	0		
PDCCH_RA	dB	O			0			
PDCCH_RB	dB							
PDSCH_RA	dB							
PDSCH_RB	dB							
OCNG_RANOTE 1	dB							
OCNG_RB ^{Note}	dB							

$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4 + TT	4 + TT	-Infinity	7 + TT	4 + TT	4 + TT
$N_{oc}^{ m Note~3}$	dBm/15 kHz	-98					
RSRP Note 4	dBm/15 kHz	-94 + TT	-94 + TT	-Infinity	-91 + TT	-94 + TT	-94 + TT
SCH_RP Note 4	dBm/15 kHz	-94 + TT	-94 + TT	-infinity	-91 + TT	-94 + TT	-94 + TT
\hat{E}_s/N_{oc}	dB	4 + TT	4 + TT	-Infinity	7 + TT	4 + TT	4 + TT
Propagation Condition		ETU70					

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE priori to the start of time period T2.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

The UE shall send one Event A3 triggered measurement report, with a measurement reporting delay less than 7682 ms from the beginning of time period T2.

TTI insertion uncertainty = 2 ms

The overall delays measured shall be less than a total of 7682 ms in this test case (note: a total of 7680 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

The rate of correct events observed during repeated tests shall be at least 90% with a confidence level of 95%.

NOTE: The actual overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays above because of TTI insertion uncertainty of the measurement report in DCCH.

8.20.3 E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

The Test Tolerances are undefined

8.20.3.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions within the E-UTRA FDD - UTRA FDD cell search requirements in CA mode.

8.20.3.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward that support CA and UTRA FDD. Applicability requires support for FGI bit 15.

8.20.3.3 Minimum conformance requirements

The measure ment reporting delay shall be less than $T_{identify,\,UTRA_FDD}$ in RRC_CONNECTED state.

When explicit neighbour list is provided and no DRX is used the UE shall be able to identify a new detectable cell within

$$T_{\text{identify, UTRA_FDD}} = T_{\text{basic_identify_UTRA_FDD}} \cdot \frac{480}{T_{\text{interd}}} \cdot N_{\textit{Freq}} \quad \textit{ms}$$

Where:

 $T_{basic_identify_UTRA_FDD} = 300 \text{ ms}$. This is the time period used in the inter-RAT equation where the maximum allowed time for the UE to identify a new UTRA FDD cell is defined.

 $T_{Interl} = 30$ ms. This is the minimum available time for inter-RAT measurement during 480 ms period

N_{Freq}: This is the number of UTRA carriers being monitored

A cell shall be considered detectable when

- CPICH Ec/Io \geq -20 dB,
- SCH_Ec/Io ≥ -17 dB for at least one channel tap and SCH_Ec/Ior is equally divided between primary synchronisation code and secondary synchronisation code. When L3 filtering is used an additional delay can be expected.

When measurement gaps are scheduled for UTRA FDD inter RAT measurement the UE physical layer shall be capable of reporting measurements to higher layers with measurement accuracy as specified in TS 36.133 [4] clause 9.2 of with measurement period given by

$$T_{\text{measurement_UTRA_FDD}} = Max \left\{ T_{\text{Measurement_Period UTRA_FDD}}, T_{\text{basic_measurement_UTRA_FDD}} \cdot \frac{480}{T_{\text{interl}}} \cdot N_{\text{Freq}} \right\} ms$$

Where:

 $X_{basic measurement UTRA_FDD} = 6 \text{ (cells)}$

 $T_{Measurement_Period\ UTRA_FDD} = 480\ ms$. The period used for calculating the measurement period.

 $T_{basic_measurement_UTRA_FDD} = 50$ ms. This is the time period used in the equation where the maximum allowed time for the UE to identify a new UTRA FDD cell is defined.

T_{Interl} = 30 ms. This is the minimum available time for inter-RAT measurement during 480 ms period

 N_{Freq} : This is the number of UTRA carriers being monitored

If the UE does not need measurement gaps to perform UTRA FDD measurements, the measurement period for UTRA FDD measurements is 480 ms.

The UE shall be capable of performing UTRA FDD CPICH measurements for $X_{basic\ measurement\ UTRA_FDD}$ inter-frequency cells per FDD frequency and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{Measurement_UTRA_FDD}$.

Reported measurements contained in event triggered measurement reports shall meet the requirements in TS 36.133 [4] clause 9.

The UE shall not send any event triggered measurement reports, as long as no reporting criteria are fulfilled.

The measurement reporting delay is defined as the time between any events that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is: twice the TTI of the uplink DCCH. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than T_{identify UTRA_FDD} defined in TS 36.133 [4] clause 8.1.2.4.1.1.1. When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.4.1 and A.8.20.3.

8.20.3.4 Test description

8.20.3.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.44 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.20.3.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.20.3.4.3.
- 5. There is one E-UTRA FDD Cell 1 for PCC, one E-UTRA FDD Cell 3 for SCC and one UTRA FDD Cell 2 specified in the test. Cell 1 (E-UTRA FDD cell for PCC) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

Table 8.20.3.1-1: General test parameters for E-UTRAN FDD-UTRAN FDD event triggered reporting in fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters (E-UTRAN		DL Reference Measurement	As specified in section A.1.1.
FDD)		Channel R.0 FDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1.
parameters		Channel R.6 FDD	
(E-UTRAN FDD)			
Gap Pattern Id		1	As specified in 3GPP TS 36.133 section 8.1.2.1.
Active cell		Cell 1	Cell 1 is on E-UTRARF channel number 1.
Neighbour cell		Cell 2	Cell 2 is on UTRARF channel number 1.
Configured active SCell		Cell 3	Cell 3 is on E-UTRARF channel number 2.
CP length		Nomal	Applicable to cell 1
E-UTRARF Channel Number		1	One E-UTRA FDD carrier frequency is
			used.
E-UTRARF Channel Number for		2	One E-UTRA FDD carrier frequency is
SCell			used.
E-UTRA Channel Bandwidth	MHz	10	
(BW _{channel})			
UTRARF Channel Number		1	One UTRA FDD carrier frequency is used.
Inter-RAT (UTR A FDD)		CPICH Ec/lo	
measurement quantity			
b1-Threshold-UTRA	dB	-18	CPICH Ec/lo threshold for event B1.
Hysteresis	dB	0	
Time To Trigger	ms	0	
Filter coefficient		0	L3 filtering is not used.
DRX		OFF	
Monitored UTRA FDD cell list size		12	UTRA cells on UTRA RF channel 1
			provided in the cell list.
T1	S	5	
T2	S	6	

8.20.3.4.2 Test procedure

The test consists of one active E-UTRA Cell 1 and one UTRA neighbour cell 2 and one configured active SCell Cell 3. In the measurement control information it is indicated to the UE that event-triggered reporting with Event B1 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 2.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all downlink physical channels except PHICH.

- 3. The SS shall configure the SCell (Cell 3) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.20.3.4.3.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133, clauses 8.3.3.2).
- 5. Set the parameters according to T1 in Table's 8.20.3.5-1 and 8.20.3.5-2. Propagation conditions are set according to Annex B clauses B.1.1 and B.2.2. T1 starts.
- 6. SS shall transmit an RRCConnectionReconfiguration message with Event B1 configured.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table's 8.20.3.5-1 and 8.20.3.5-2.
- 9. The UE shall transmit a Measurement Report message triggered by Event B1. If the overall delay measured from the beginning of time period T2 is less than 4802 ms then the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement then the number of failure tests is increased by one.
- 10. After the SS receives the MeasurementReport message in step 9) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 11. The SS shall set Cell 2 primary scrambling code = ((current cell 2 primary scrambling code 50) mod 200 + 100) for the next iteration of the test procedure loop.
- 12. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3), or
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 13. Repeat steps 2-12 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.20.3.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.20.3.4.3-1: Common Exception messages for E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.3.1-7				

Table 8.20.3.4.3-2: *MeasConfig-DEFAULT*: E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	I.6.6-1 MeasConfig-DEFAULT	:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	3 entries		
measObjectId[1]	IdMeasObject-f1	f1 is the frequency of the serving cell (E-UTRA Cell)	
measObject[1]	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
measObjectId[2]	ldMeasObject-f2	f2 is the frequency of the configured SCeII (E-UTRA CeII)	
meas Object[2]	MeasObjectEUTRA- GENERIC(f2)	E-UTRA Cell	
meas ObjectId[3]	IdMeasObject-f10	f10 is the frequency of the neighbouring cell(UTRA Cell)	
measObject[3]	MeasObjectUTRA- GENERIC(f10)	UTRA Cell	
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId))OF SEQUENCE {			
reportConfigId	idReportConfig-B1		
reportConfig	ReportConfigInterRAT- B1-UTRA		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measId	1		
meas ObjectId	IdMeasObject-f10		
reportConfigId	idReportConfig-B1		
}	<u> </u>		
quantityConfig	QuantityConfig- DEFAULT		UTRAN
meas GapConfig	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}	'		

Table 8.20.3.4.3-3: ReportConfigInterRAT-B1-UTRA: Additional E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6	6.6-7B ReportConfigInterR	AT-B1(EUTRA-Thres)	
Information Element	Value/remark	Comment	Condition
ReportConfigInterRAT-B1-UTRA(UTRA-Thres) ::=			
SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventB1 SEQUENCE {			
b1-Threshold CHOICE {			
b1-ThresholdUTRA CHOICE {			
utra-EcN0	13 (-18 dB)	-18 dB is actual	
		EcNO value in dB ((13 - 49)/2 dB)	
}			
}			
}			
}			
hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
}		,	
}			
}			

Table 8.20.3.4.3-4: *MeasResults*: Additional E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5		•	•
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultPCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultListUTRA	MeasResultListUTRA		
}			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE (SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		Cell 3	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			

Table 8.5.1.4.3-5: MeasResultListUTRA: Additional E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	250	PhysCellIdUTRA- FDD INTEGER (0511)	
}			
measResult SEQUENCE {			
utra-EcN0		Set according to specific test	
}			
}			

8.20.3.5 Test requirement

Tables 8.20.3.4.1-1, 8.20.3.5-1 and 8.20.3.5-2 define the primary level settings including test tolerances for event triggered reporting under fading propagation conditions in asynchronous inter frequency cells test in CA mode.

Table 8.20.3.5-1: Cell specific test parameters for E-UTRAN FDD (cell # 1, cell # 3) for event triggered reporting of UTRAN FDD cell under fading propagation conditions

Parameter	Unit	Cell 1		Cell	3	
		T1	T2	T1	T2	
E-UTRARF Channel		1		2		
Number						
BW _{channel}	MHz	1()	10		
OCNG Pattern						
defined in D.1.1		OP.1	FDD	OP.1 F	-DD	
(OP.1 FDD)						
PBCH_RA	dB					
PBCH_RB	dB					
PSS_RA	dB					
SSS_RA	dB					
PCFICH_RB	dB					
PHICH_RA	dB			0		
PHICH_RB	dB	0				
PDCCH_RA	dB					
PDCCH_RB	dB					
PDSCH_RA	dB					
PDSCH_RB	dB					
OCNG_RA ^{NOTE T}	dB					
OCNG_RB ^{Note 1}	dB					
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4 + TT	4+ TT	4+ T	Т	
\hat{E}_s/N_{oc}	dB	4+ TT	4+ TT	4+ T	Т	
N_{oc}	dBm/15			98		
1 v oc	kHz		-;	90		
RSRP	dBm/15 kHz	-94+ TT -94+ TT		-94+	π	
SCH_RP	dBm/15 kHz	-94+ TT	-94+ TT	-94+	Π	
Propagation Condition		ETU70				

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

Table 8.20.3.5-2: Cell specific test parameters for UTRAN FDD (cell # 2) for event triggered reporting of UTRAN FDD cell under fading propagation conditions

Parameter	Unit	Cell 2		
		T1	T2	
UTRARF Channel Number		,	1	
CPICH_Ec/lor	dB	-1	10	
PCCPCH_Ec/lor	dB	-1	12	
SCH_Ec/lor	dB	-1	12	
PICH_Ec/lor	dB	-1	15	
DPCH_Ec/lor	dB	N/A		
OCNS		-0.9	941	
\hat{I}_{or}/I_{oc}	dB	-Infinity	-3.35 + TT	
I_{oc}	dBm/3.84 MHz	-70		
CPICH_Ec/lo	dB	-Infinity	-15+ TT	
Propagation Condition		AWĠN		

Note 2: The power of the OCNS channel that is added shall make the total power from the cell to be equal to I_{or}.

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event B1 triggered measurement report to Cell 2.

The overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

Measurement reporting delay = $T_{identify, UTRA_FDD}$

$$T_{\text{identify, UTRA_FDD}} = T_{\text{basic_identify_UTRA_FDD}} \cdot \frac{480}{T_{\text{interl}}} \cdot N_{\text{Freq}} \quad ms$$

 $T_{basic_identify_UTRA_FDD} = 300 \text{ ms}$

 $T_{Inter1} = 30 \text{ ms}$

 $N_{Freq} = 1$

TTI insertion uncertainty = 2 ms

The overall delays measured shall be less than a total of 4802 ms in this test case (note: this gives a total of 4800 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

8.20.4 E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

The Test Tolerances are undefined

8.20.4.1 Test purpose

To verify the UE's ability to make a correct reporting of an event under fading propagation conditions within the E-UTRA TDD - UTRA TDD cell search requirements in CA mode.

8.20.4.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward that support CA and UTRA TDD. Applicability requires support for FGI bit 15.

8.20.4.3 Minimum conformance requirements

The measurement reporting delay shall be less than Tidentify, UTRA TIDD in RRC_CONNECTED state.

When explicit neighbour list is provided and no DRX is used the UE shall be able to identify a new detectable cell belonging to the monitored set within

$$T_{\text{identify, UTRA_TDD}} = Max \left\{ 5000, T_{\text{basic identify UTRA_TDD}} \cdot \frac{480}{T_{\text{interl}}} \cdot N_{Freq} \right\} ms$$

If the UE does not require transmit gap to perform inter-RAT UTRA TDD measurements, the UE shall be able to identify a new detectable inter-RAT UTRA TDD cell belonging to the monitored set within 5000 ms.

A cell shall be considered detectable when

- P-CCPCH Ec/Io \geq -8 dB,
- DwPCH_Ec/Io \geq -5 dB.

When L3 filtering is used an additional delay can be expected.

When measurement gaps are scheduled for UTRA TDD inter RAT measurements the UE physical layer shall be capable of reporting measurements to higher layers with measurement accuracy as specified in TS 36.133 [4] clause 9.3 with measurement period given by

$$T_{\text{measurement UTRA_TDD}} = Max \left\{ T_{\text{Measurement_Period UTRA_TDD}}, T_{\text{basic measurement UTRA_TDD}} \cdot \frac{480}{T_{\text{interl}}} \cdot N_{\text{Freq}} \right\} ms$$

If the UE does not need measurement gaps to perform UTRA TDD measurements, the measurement period for UTRA TDD measurements is 480 ms.

The UE shall be capable of performing UTRA TDD P-CCPCH RSCP measurements for $X_{basic\ measurementUTRA_TDD}$ interfrequency cells per TDD frequency of the monitored set and the UE physical layer shall be capable of reporting measurements to higher layers with the measurement period of $T_{Measurement_UTRA_TDD}$.

 $X_{\text{basic measurementUTRA_TDD}} = 6$

 $T_{Measurement_Period\ UTRA_TDD}$ = 480 ms is the period used for calculating the measurement period $T_{measurement_UTRA_TDD}$ for UTRA TDD P-CCPCH RSCP measurements.

 $T_{basic_identify_UTRA_TDD} = 800 \text{ ms}$ is the time period used in the inter RAT equation where the maximum allowed time for the UE to identify a new UTRA TDD cell is defined.

 $T_{basic_measurement_UTRA_TDD} = 50$ ms is the time period used in the equation for defining the measurement period for inter RAT P-CCPCH RSCP measurements.

N_{freq} and T_{interl} are defined in TS 36.133 [4] section 8.1.2.1.1

Reported measurements in event triggered measurement reports shall meet the requirements in TS 36.133 [4] section 9.

The UE shall not send any event triggered measurement reports, as long as the reporting criteria is not fulfilled.

The measurement reporting delay is defined as the time between any event that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH. The delay uncertainty is twice the TTI of the uplink DCCH. This measurement reporting delay excludes a delay which caused by no UL resources for UE to send the measurement report.

The event triggered measurement reporting delay, measured without L3 filtering shall be less than $T_{identify,\,UTRA_TDD}$ defined in TS 36.133 [4] Section 8.1.2.4.3.1.1 When L3 filtering is used an additional delay can be expected.

The normative reference for this requirement is TS 36.133 [4] clause 8.1.2.4.3 and A.8.20.4.

8.20.4.4 Test description

8.20.4.4.1 Initial conditions

Test Environment: Normal, as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex E table E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and faders and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7], Figure group A.44 as appropriate.
- 2. The general test parameter settings are set up according to Table 8.20.4.4.1-1.
- 3. Propagation conditions are set according to Annex B clauses B.0.
- 4. Message contents are defined in clause 8.20.4.4.3.
- 5. There is one E-UTRA TDD Cell 1 for PCC, one E-UTRA TDD Cell 3 for SCC and one UTRA TDD Cell 2 specified in the test. Cell 1 (E-UTRA TDD cell for PCC) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

Table 8.20.4.4.1-1: General test parameters for E-UTRA TDD to UTRA(1.28 Mcps TDD OPTION) cell search in fading propagation conditions

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 TDD	As specified in section A.1.2
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement Channel R.6 TDD	As specified in section A.2.2
E-UTRARF Channel Number		1	One E-UTRATDD carrier frequency is used.
E-UTRARF Channel Number for SCell		2	One E-UTRA TDD carrier frequency is used.
Active cell		Cell 1	E-UTRATDD cell
Neighbour cell		Cell 2	UTRA 1.28Mcps TDD Cell
Configured active SCell		Cell 3	E-UTRATDD cell
Gap Pattern Id		0	As specified in 3GPP TS 36.133 section 8.1.2.1.
Uplink-downlink configuration of cell 1		1	As specified in table 4.2.2 in TS 36.211
Special subframe configuration of cell 1		6	As specified in table 4.2.1 in TS 36.211
CP length of cell 1		nomal	
Hysteresis	dB	0	
TimeToTrigger	S	0	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
Time offset between cells		3 ms	Asynchronous cells
Ofn	dB	0	
Thresh	dBm	-87	
T1	S	5	
T2	S	10	

8.20.4.4.2 Test procedure

This test scenario comprised of 1 E-UTRA TDD PCell, 1 E-UTRA TDD SCell and 1 UTRA TDD cell to be searched. In the measurement control information it is indicated to the UE that event-triggered reporting with Event B1 is used. The test consists of two successive time periods, with time durations of T1 and T2 respectively. During time duration T1, the UE shall not have any timing information of Cell 2.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0, C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 3) on the SCC as per TS 36.508 [7] clause 5.2A.4 with the message content exceptions defined in clause 8.20.4.4.3.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133, clauses 8.3.3.2).
- 5. Set the parameters according to T1 in Table's 8.20.4.5-1 and 8.20.4.5-2. Propagation conditions are set according to Annex B clause B.1.1 and B.2.2. T1 starts.
- 6. SS shall transmit an RRCConnectionReconfiguration message with Event B1 configured.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. When T1 expires, the SS shall switch the power setting from T1 to T2 as specified in Table's 8.20.4.5-1 and 8.20.4.5-2.
- 9. The UE shall transmit a Measurement Report message triggered by Event B1. If the overall delay measured from the beginning of time period T2 is less than 6402 ms then the number of successful tests is increased by one. If the UE fails to report the event within the overall delays measured requirement then the number of failure tests is increased by one.
- 10. After the SS receives the MeasurementReport message in step 6) or when T2 expires, the SS shall transmit RRCConnectionRelease message to release the RRC connection which includes the release of the established radio bearers as well as all radio resources.
- 11. SS shall change to set cell 2 cell parameter id = (current cell 2 cell parameter id +4) mod 16.
- 12. After the RRC connection release, the SS:
 - transmits in Cell 1 a Paging message (including Paging Record with ue-Identity) for the UE and ensures the UE is in State 3A according to TS 36.508 [7] clause 4.5.3A (if the paging fails, switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3),
 - switches off and on the UE and ensures the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
 - 13. Repeat step 2-12 until the confidence level according to Tables G.2.3-1 in Annex G clause G.2 is achieved.

8.20.4.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 8.20.4.4.3-1: Common Exception messages for E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.3.1-7				

Table 8.20.4.4.3-2: *MeasConfig-DEFAULT*: E-UTRAN FDD - UTRAN FDD event triggered reporting under fading propagation conditions

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 Meas Config-DEFAULT: Information Element Value/remark Comment Condition					
	value/remark	Comment	Condition		
MeasConfig-DEFAULT ::= SEQUENCE {					
measObjectToRemoveList	Not present				
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	3 entries				
measObjectId[1]	IdMeasObject-f1	f1 is the frequency of the serving cell (E-UTRA Cell)			
meas Object[1]	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell			
measObjectId[2]	IdMeasObject-f2	f2 is the frequency of the configured SCeII (E-UTRA CeII)			
meas Object[2]	MeasObjectEUTRA- GENERIC(f2)	E-UTRA Cell			
measObjectId[3]	IdMeasObject-f9	f9 is the frequency of the neighbouring cell(UTRA Cell)			
measObject[3]	MeasObjectUTRA- GENERIC(f9)	UTRA Cell			
}	N				
reportConfigToRemoveList	Not present				
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry				
reportConfigld	idReportConfig-B1				
reportConfig	ReportConfigInterRAT- B1-UTRA				
}					
measIdToRemoveList	Not present				
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry				
measld	1				
measObjectId	IdMeasObject-f9				
reportConfigId	idReportConfig-B1				
}					
quantityConfig	QuantityConfig- DEFAULT		UTRAN		
m eas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0		
s-Measure	Not present				
preRegistrationInfoHRPD	Not present				
speedStatePars	Not present				
}	·				

Table 8.20.4.4.3-3: ReportConfigInterRAT-B1-UTRA: Additional E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions

Derivation Path: 36.508 clause 4.6.6 Table 4.6.6-7B			
Information Element	Value/remark	Comment	Condition
ReportConfigInterRAT-B1-UTRA(UTRA-Thres) ::=			
SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
eventId CHOICE {			
eventB1 SEQUENCE {			
b1-Threshold CHOICE {			
b1-ThresholdUTRA CHOICE {			
utra-RSCP	28	UTRA-Thres is	UTRA-TDD
		actual RSCP value	
		in dBm	
		UTRA-Thres + 115	
}			
}			
}			
}			
hysteresis	0 (0dB)	The actual value is	
		IE value * 0.5 dB.	
timeToTrigger	ms0		
}			
}			
}			

Table 8.20.4.4.3-4: *MeasResults*: Additional E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultPCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListUTRA	MeasResultListUTRA		
}			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE (SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
meas ResultSCell-r10 SEQUENCE {		Cell 3	
rsrpResultSCell-r10	(097)		
rsrqResultSCell-r10	(034)		
}			
}			
}			

Table 8.20.4.4.3-4: MeasResultListUTRA: Additional E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
Meas ResultListUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE (
physCellId CHOICE {			
tdd	PhysCellIdUTRA-TDD	INTEGER (0127)	
}			
measResult SEQUENCE {			
utra-RSCP		Set according to specific test INTEGER (-591)	
}			
}			

8.20.4.5 Test requirement

Tables 8.20.4.4.1-1, 8.20.4.5-1 and 8.20.4.5-2 define the primary level settings including test tolerances for E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions in synchronous cells test in CA mode.

Table 8.20.4.5-1: Cell specific test parameters for cell search E-UTRA TDD to UTRA TDD test case (cell 1, cell3)

Parameter	Unit	Ce	II 1	Cell 3	
		T1	T2	T1	T2
E-UTRARF Channel Number		,	1	2	2
BW _{channel}	MHz	1	0	10	
OCNG Pattern defined in D.2.1 (OP.1 TDD)		OP.1	TDD	OP.1 TDD	
PBCH_RA	dB				
PBCH_RB	dB				
PSS_RA	dB				
SSS_RA	dB				
PCFICH_RB	dB				
PHICH_RA	dB				
PHICH_RB	dB	0	0	0	0
PDCCH_RA	dB				
PDCCH_RB	dB				
PDSCH_RA	dB				
PDSCH_RB	dB				
OCNG_RA ^{NOIE}	dB				
OCNG_RB ^{NOTE1}	dB				
$\hat{\mathbf{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	9 + TT	9 + TT	9 + TT	9 + TT
\hat{E}_s/N_{oc}	dB	9 + TT	9 + TT	9 + TT	9 + TT
N_{oc}	dBm/15kHz	-98			
RSRP	dBm/15kHz	-89 + TT	-89 + TT	-89 + TT	-89 + TT
SCH_RP	dBm/15kHz	-89 + TT	-89 + TT	-89 + TT	-89 + TT
Propagation Condition		ETÚ70			

Note 1: OCNG shall be used such that cell is fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: The resources for uplink transmission are assigned to the UE prior to the start of time period T2.

Table 8.20.4.5-2: Cell specific test parameters for cell search E-UTRA TDD to UTRA TDD test case
(cell 2)

Par	ameter	Unit	Cell 2 (UTRA)				
Times	lot Number		0 DwPTS			wPTS	
			T1	T2	T1	T2	
UTRA F Num	RF Channel ber ^{NOTE1}		Channel 2				
PCCP	CH_Ec/lor	dB	-3	-3			
DwP(CH_Ec/lor	dB			0	0	
OCNS_	_Ec/lorNOTE2	dB	-3	-3			
\hat{I}_o	\hat{I}_{or}/I_{oc}		-inf	5 + TT	-inf	5 + TT	
	I_{oc}	dBm/1.28 MHz	-80				
PCCP	CH RSCP	dBm	-inf	-78 + TT	n.a.	n.a.	
	oagation ondition		Case 3 ^{NOTE3}				
Note 1: Note 2:	Number is th	e case of multi-frequency cell, the UTRA RF Channel ber is the primary frequency's channel number. power of the OCNS channel that is added shall make the					
	total power from the cell to be equal to lor.						

The overall delays measured is defined as the time from the beginning of time period T2, to the moment the UE send one Event B1 triggered measurement report to Cell 2.

Case 3 propagation conditions are defined in Annex B of 3GPP

The overall delays measured in the test may be up to 2xTTI_{DCCH} higher than the measurement reporting delays because of TTI insertion uncertainty of the measurement report in DCCH.

The overall delays measured test requirement is expressed as:

Overall delays measured = measurement reporting delay + TTI insertion uncertainty

TS 25.102

Measurement reporting delay = $T_{identify, UTRA_TDD}$

Note 3:

$$\mathbf{T}_{\text{identify, UTRA_TDD}} = \textit{Max} \bigg\{ 5000, \mathbf{T}_{\text{basic identify UTRA_TDD}} \cdot \frac{480}{\mathbf{T}_{\text{interl}}} \cdot N_{\textit{Freq}} \bigg\} \textit{ms}$$

 $T_{basic_identify_UTRA_TDD} = 800 \text{ ms}$

 $T_{Interl} = 60 \text{ ms}$

 $N_{Freq} = 1$

TTI insertion uncertainty = 2 ms

The overall delays measured shall be less than a total of 6402 ms in this test case (note: this gives a total of 6400 ms for measurement reporting delay plus 2 ms for TTI insertion uncertainty).

For the test to pass, the total number of successful tests shall be more than 90% of the cases with a confidence level of 95%.

9 Measurement Performance Requirements

When the UE is in RRC_CONNECTED state on a cell, physical layer measurements as defined in TS 36.214 [12] clause 5 are initiated and reported to higher layers. To initiate a specific measurement, the System Simulator sends a 'RRC Connection Reconfiguration message' to the UE including a measurement ID and type, a command (setup, modify, release), the measurement objects, the measurement quantity, the reporting quantities and the reporting criteria (periodical/event-triggered), the physical layer measurement process takes place. In this process when the reporting criteria are fulfilled the UE sends a 'Measurement Report message' to the System Simulator including the measurement ID and the results. The reporting criteria that trigger the UE to send a 'Measurement Report message' to the System

Simulator is periodical as defined in TS 36.331 [5] clause 5.5.4. The physical layer measurements succeed only if the performance results in terms of accuracy are within the specified limits.

Since the UE reference sensitivity requirements are different depending on supported band, this is noted in each case with definition of the range Io for each frequency band.

The accuracy requirements in this clause are applicable for AWGN radio propagation conditions and assume independent interference (noise) at each receiver antenna port.

The reported measurement results after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period.

The accuracy requirements are valid for the reported measurement results after layer 1 filtering.

Unless explicitly stated:

- In state RRC_CONNECTED
- Reported measurements shall be within defined range in 90 % of the cases.
- Measurement channel is as defined in Annex A. This measurement channel is used both in active cell and cells to be measured.
- The reference channels assume transmission of PDSCH with a maximum number of 5 HARQ transmissions unless otherwise specified.
- SS transmits PDSCH via PDCCH DCI format 1A for C_RNTI to transmit the DL RMC according to Annex A1. The SS sends downlink MAC padding bits on the DL RMC.
- Uplink is configured according to Annex A.3.
- Propagation condition is AWGN as defined in Annex B.
- Physical channels used as defined in Annex C.
- Cell 1 is the active cell.
- Single task reporting.
- Power control is active.

NOTE: For Band 26, the tests shall be performed with the assigned E-UTRA channel bandwidth within 865-894 MHz.

9.1 RSRP

9.1.1 FDD Intra frequency RSRP Accuracy

9.1.1.1 FDD Intra Frequency Absolute RSRP Accuracy

9.1.1.1.1 Test purpose

To verify that the FDD intra-frequency absolute RSRP measurement accuracy is within the specified limit for all bands.

9.1.1.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.1.1.1.3 Minimum conformance requirements

The absolute accuracy of RSRP is defined as the RSRP measured from a cell on the same frequency as that of the serving cell.

The accuracy requirements in table 9.1.1.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.1 for a corresponding Band.

Table 9.1.1.1.3-1: RSRP FDD Intra frequency absolute accuracy

Accı	ıracy		Conditions				
Normal	Extreme	Ês/lot	lo Note i range				
condition	condition	L3/10t	E-UTRA operating bands	Mini	mum Io	Maximum lo	
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70	
			9, 42, 43	-120	N/A	-70	
			28	-119.5	N/A	-70	
			2, 5, 7, 27, 41, 44	-119	N/A	-70	
±6	±9	≥-6 dB	26	-118.5 Note ≥	N/A	-70	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note	-118	N/A	-70	
			25	-117.5	N/A	-70	
±8	±11	≥-6 dB	Note 3	N/A	-70	-50	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 5: The condition level is increased by $\Delta > 0$, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.1.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.1.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.1, clause 9.1.4 and A.9.1.1.

9.1.1.1.4 Test description

9.1.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.1.1.4.3.
- 4. All cells are in the same carrier frequency. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.1.1.4.2 Test procedure

- 1. Ensure that the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.1.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check RSRP reported value in Measurement Report messages. The RSRP value of Cell 2 reported by the UE is compared to the actual RSRP value according to Table 9.1.1.1.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.1.1.5-2 as appropriate.

9.1.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.1.1.4.3-1: Common Exception messages for RSRP FDD Intra frequency absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-1			
	Table H.3.5-3			

Table 9.1.1.1.4.3-2: *MeasResults*: Additional RSRP FDD Intra frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.1.1.4.3-3: MeasResultListEUTRA: Additional RSRP FDD Intra frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present		
}			
}			

9.1.1.1.5 Test requirement

Table 9.1.1.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD intra-frequency relative accuracy test shall meet the reported values test requirements in table 9.1.1.1.5-3.

Table 9.1.1.1.5-1: Void

Table 9.1.1.1.5-2: RSRP FDD Intra frequency absolute accuracy test parameters

_		Test 1		Test 2		Test 3		
Pa	arameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number		1		1		1	
BW _{channel}		MHz	10	0	10		10	
Measurement b	andwidth	n_{PRB}	22-	-27	22—27		22—27	
PDSCH Refere channel defined	nce measurement d in A.1.1		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-
PDSCH allocat	ion	n_{PRB}	13—36	-	13—36	-	13—36	-
	H/PHICH Reference hannel defined in	TIU	R.6 F	FDD	R.6 F	-DD	R.6 F	FDD
(OP.1 FDD) and	defined in D.1.1 D.1.2 (OP.2 FDD)		OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB								
PHICH_RA PHICH_RB PDCCH_RA PDCCH_RA		dB	0	0	0	0	0	0
PDSCH_RA PDSCH_RB OCNG_RANOTET OCNG_RBNOTET								
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-116.0	
	Band 9						-11	
$N_{oc}^{ m Note2}$	Band 28 Bands 2, 5, 7, 26 Note 5, 27	dBm/15 kHz	-107.0		-88.0		-114.5 -114.0	
	Bands 3, 8, 12, 13, 14, 17, 20, 22, 29 Note 6						-113.0	
	Band 25						-112.5	
$\hat{\mathrm{E}}_{_{\mathrm{s}}}/\mathrm{I}_{_{\mathrm{ot}}}$		dB	1.88	-4.97	1.88	-4.97	0.09	-4.96
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24 Band 9 Band 28						-113.0 -112.0 -111.5	-116.2 -115.2 -114.7
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/15 kHz	-101.0	-105.0	-82.0	-86.0	-111.0	-114.7
	Bands 3, 8, 12, 13, 14, 17, 20, 22, 29 Note 6						-110.0	-113.2
	Band 25						-109.5	-112.7
	Bands 1, 4, 6,10, 11, 18, 19, 21, 23, 24						-82	
	Band 9 Band 28						-81 -80	
lo ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/9 MHz	-71	.05	-52.05		-80	
	Bands 3, 8, 12, 13, 14, 17, 20, 22, 29 Note 6						-79	.25
	Band 25						-78.75	

\hat{E}_s/N_{oc}	dB	6.0	2.0	6.0	2.0	3.0	-0.2
Propagation condition	-	AWGN		AWGN		AW	GN
Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectrodensity is achieved for all OFDM symbols.					spectral		

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz.

Note 6: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

Table 9.1.1.1.5-3: RSRP FDD Intra frequency absolute accuracy requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2 All bands	Test 3		
			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_17	
			Band 9	RSRP_18	
Lowest reported value (Call 2)	DCDD 20	DCDD 45	Band 28	RSRP_18	
Lowest reported value (Cell 2)	RSRP_28	RSRP_45	Bands 2, 5, 7, 26 and 27	RSRP_19	
			Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_20	
			Band 25	RSRP_20	
			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_32	
			Band 9	RSRP_33	
Highest reported value (Coll 2)	RSRP_43	DCDD 64	Band 28	RSRP_33	
Highest reported value (Cell 2)	KSKF_43	RSRP_64	Bands 2, 5, 7, 26 and 27	RSRP_34	
			Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_35	
			Band 25	RSRP_35	
	T44	T		•	
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3		
Extreme Conditions			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_14	
Extreme Conditions			Bands 1, 4, 6, 10, 11, 18,	RSRP_14 RSRP_15	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_15 RSRP_15	
Extreme Conditions Lowest reported value (Cell 2)			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27	RSRP_15	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_15 RSRP_15 RSRP_16 RSRP_17	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17,	RSRP_15 RSRP_15 RSRP_16	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_15 RSRP_15 RSRP_16 RSRP_17 RSRP_17 RSRP_35	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18,	RSRP_15 RSRP_15 RSRP_16 RSRP_17 RSRP_17	
Lowest reported value (Cell 2)	RSRP_25	All bands RSRP_42	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_15 RSRP_15 RSRP_16 RSRP_17 RSRP_17 RSRP_35	
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9	RSRP_15 RSRP_15 RSRP_16 RSRP_17 RSRP_17 RSRP_35 RSRP_36	
Lowest reported value (Cell 2)	RSRP_25	All bands RSRP_42	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_15 RSRP_15 RSRP_16 RSRP_17 RSRP_17 RSRP_35 RSRP_36 RSRP_36	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.1.2 FDD Intra Frequency Relative Accuracy of RSRP

Editor's note: This Test case is incomplete for frequencies above 3GHz

• The Test system uncertainties applicable above 3GHz are undefined

The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.1.1.2.1 Test purpose

To verify that the FDD intra-frequency relative accuracy measurement of RSRP is within the specified limit for all bands.

9.1.1.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.1.1.2.3 Minimum conformance requirements

The relative accuracy of RSRP is defined as the RSRP measured from one cell compared to the RSRP measured from another cell on the same frequency.

The accuracy requirements in table 9.1.1.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|_{dBm} according to Annex I.3.8 for a corresponding Band.

Table 9.1.1.2.3-1: RSRP FDD Intra frequency relative accuracy

Accı	uracy		Conditions		
Normal	Extreme	Es/lot Note	lo ^{note 1} i	range	
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/15kHz Note 6	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±2	±3	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50
			26	-118.5 Note 3	-50
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50
			29 Note 5	-118	-50
			25	-117.5	-50
±3	±3	≥-6 dB	Note 4	Note 4	Note 4

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

The parameter Ês/lot is the minimum Ês/lot of the pair of cells to which the requirement applies. The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-NOTE 3: UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.1.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.2, clause 9.1.4 and A.9.1.1.

9.1.1.2.4 Test description

9.1.1.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS and AWGN noise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.1.2.4.3.
- 4. All cells are in the same carrier frequency. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.1.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.1.2.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRP value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each Measurement Report message according to Table 9.1.1.2.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.1.2.5-2 as appropriate.

9.1.1.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.1.2.4.3-1: Common Exception messages for RSRP FDD Intra frequency relative accuracy test requirement

Default Message Contents					
Common contents of system information blocks exceptions					
elements contents exceptions	Table H.3.1-1 Table H.3.5-1 Table H.3.5-3				

Table 9.1.1.2.4.3-2: *MeasResults*: Additional RSRP FDD intra frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
<i>}</i>			

Table 9.1.1.2.4.3-3: MeasResultListEUTRA: Additional RSRP FDD intra frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
meas Result SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult	Not present		
}			
}			

9.1.1.2.5 Test requirement

Table 9.1.1.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD intra-frequency relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.1.2.5-3.

Table 9.1.1.2.5-1: Void

Table 9.1.1.2.5-2: RSRP FDD Intra frequency relative accuracy test parameters

ſ	Parameter	Unit	Test 1	Test 2	Test 3	
	Faranielei		Cell 1 Cell 2	Cell 1 Cell 2	Cell 1 Cell 2	

E-UTRARF Ch	annel Number		1		1		1		
BW _{channel}		MHz	1	0	10		10		
Measurement b	pandwidth	n_{PRB}	22-	-27	22-	22—27		22—27	
PDSCH Refere	nce measurement d in A.1.1	TIW	R.0 FDD	-	R.0 FDD	-	R.0 FDD	-	
PDSCH allocat	ion	n_{PRB}	13—36	-	13—36	-	13—36	-	
PDCCH/PCFICH/PHICH Reference measurement channel defined in		TIW	R.6 F	-DD	R.6 F	-DD	R.6 F	חח	
A.1.2.1									
	s defined in D.1.1 d D.1.2 (OP.2 FDD)		OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD	
PBCH_RA PBCH_RB									
PSS_RA									
SSS_RA PCFICH_RB									
PHICH_RA									
PHICH_RB		dB	0	0	0	0	0	0	
PDCCH_RA PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG_RANOLE1									
OCNG_RB ^{Note1}									
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24		-106.00	-106.00	-88.00	-88.00	-116.00		
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26 NOW 5, 27 Band 25	dBm/15 kHz					-114.00		
	Band 28						-112.50 -114.5		
	Bands 3, 8, 12, 13, 14, 17, 20, 22 Band 9						-113 -115		
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	band 9	dB	1.88	-4.97	1.88	-4.97	-0.01	-4.76	
s / Tot	Bands 1, 4, 6,10, 11,		-		-			*****	
	18, 19, 21, 23 and 24						-113.00	-116.00	
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/15 kHz	-100.00	-104.00	-82.00	-86.00	-111.00		
	Band 25 Band 28	25117 10 KI IZ		101.00	02.00	00.00	-109.50 -111.5	-112.50 -114.5	
	Bands 3, 8, 12, 13,						-110.00	-113.00	
	14, 17, 20, 22 Band 9						-112.00	-115.00	
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-82	.20	
lo ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	-ID /O A # !	70.5-	70.5-	F0 6-	F0.6-	-80	.20	
IO	Band 25	dBm/9 MHz	-70.05	-70.05	-52.05	-52.05	-78		
	Band 28 Bands 3, 8, 12, 13,						-80		
	14, 17, 20, 22						-79		
\hat{E}_s/N_{oc}	Band 9	dB	6.00	2.00	6.00	2.00	-81 3.00	0.00	
	ndition								
Propagation co	manton	-	AW	GIN	AW	UIV	AW	אוכ	

Note 1:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral
	density is achieved for all OFDM symbols.

- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.
- Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz

Table 9.1.1.2.5-3: RSRP FDD Intra frequency relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3			
	All bands	All bands	All bands			
Nomal Conditions		•				
Lowest reported value (Cell 2)	RSRP_x-9	RSRP_x-9	RSRP_x-8			
Highest reported value (Cell 2)	RSRP_x+1	RSRP_x+1	RSRP_x+2			
Extreme Conditions	Extreme Conditions					
Lowest reported value (Cell 2)	RSRP_x-9	RSRP_x-9	RSRP_x-8			
Highest reported value (Cell 2)	RSRP_x+1	RSRP_x+1	RSRP_x+2			
RSRP_x is the reported value of Cell 1						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.2 TDD Intra frequency RSRP Accuracy

9.1.2.1 TDD Intra Frequency Absolute RSRP Accuracy

9.1.2.1.1 Test purpose

To verify that the TDD intra-frequency absolute RSRP measurement accuracy is within the specified limit for all bands.

9.1.2.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.1.2.1.3 Minimum conformance requirements

The absolute accuracy of RSRP is defined as the RSRP measured from a cell on the same frequency as that of the serving cell.

The accuracy requirements in Table 9.1.2.1-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.1 for a corresponding Band.

Table 9.1.2.1.3-1: RSRP TDD Intra frequency absolute accuracy

Accı	ıracy			ditions		
Normal	Extreme	Ês/lot	lo Note 1 range			
condition	condition	LS/IO	E-UTRA operating bands	Mini	mum lo	Maximum lo
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70
			9, 42, 43	-120	N/A	-70
			28	-119.5	N/A	-70
			2, 5, 7, 27, 41, 44	-119	N/A	-70
±6	±9	≥-6 dB	26	-118.5 Note 2	N/A	-70
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note	-118	N/A	-70
			25	-117.5	N/A	-70
±8	±11	≥-6 dB	Note 3	N/A	-70	-50

- NOTE 1: lo is assumed to have constant EPRE across the bandwidth.
- NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 5: The condition level is increased by Δ >0, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.2.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.2.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
		•••
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.1, clause 9.1.4 and A.9.1.2.

9.1.2.1.4 Test description

9.1.2.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.2.1.4.3.
- 4. All cells are in the same carrier frequency. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.2.1.4.2 Test procedure

- 1. Ensure that the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.2.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check RSRP reported value in Measurement Report messages. The RSRP value of Cell 2 reported by the UE is compared to actual RSRP value according to Table 9.1.2.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.2.1.5-2 as appropriate.

9.1.2.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.1.2.1.4.3-1: Common Exception message for RSRP TDD intra frequency absolute accuracy test requirement

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.3.5-1				
_	Table H.3.5-3				

Table 9.1.2.1.4.3-2: *MeasResults*: Additional RSRP TDD intra frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
m eas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.2.1.4.3-3: MeasResultListEUTRA: Additional RSRP TDD intra frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas Results LIstEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId of Cell 2	INTEGER (0503)	
measResult SEQUENCE {			
rsrpResult			
rsrqResult	Not present		
}			
}			

9.1.2.1.5 Test requirement

Table 9.1.2.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD intra-frequency absolute accuracy test shall meet the reported values test requirements in table 9.1.2.1.5-3.

Table 9.1.2.1.5-1: Void

Table 9.1.2.1.5-2: RSRP TDD Intra frequency absolute accuracy test parameters

Parameter		l lmit	Tes	st 1	Tes	t 2	Tes	Test 3	
	arameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
E-UTRARF Channel Number			1		1		1		
BW _{channel}		MHz	10		10		10		
	ame configuration Notes		6	3	6	5	(6	
Uplink/downlin	nk configuration Note 1		1		1		1		
Measurement	bandwidth	n_{PRB}	22-	–27	22-	-27	22-	–27	
PDSCH Refer	rence measurement		R.0		R.0		R.0		
channel define	ed in A.1.2		TDD	-	TDD	-	TDD	-	
PDSCH alloca	ation	$n_{{\it PRB}}$	13—36	-	13—36	-	13—36	-	
PDCCH/PCFI	CH/PHICH Reference								
measurement	channel defined in		R.6	TDD	R.6 ⁻	ΓDD	R.6	TDD	
A.2.2									
OCNG Pattern	ns defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2	
	nd D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD	
PBCH_RA	·								
PBCH_RB									
PSS_RA									
SSS_RA									
PCFICH_RB									
PHICH_RA									
PHICH_RB		dB	0	0	0	0	0	0	
PDCCH_RA									
PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG RANOTE	92								
OCNG_RB ^{NOIS}	32								
	Bands 33, 34, 35, 36, 37, 38, 39, 40		-107.0		-88.0		-116.0		
$N_{oc}^{ m Note3}$	Band 42, 43	dBm/15 kHz					-115.0		
	Band 41, [44]						-11	4.0	
Ê/I		4D	4.00	4.07	4.00	4.07		1	
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	1.88	-4.97	1.88	-4.97	0.09	-4.96	
	Bands 33, 34, 35, 36, 37, 38, 39, 40						-113	-116.2	
RSRP ^{Note4}	Band 42, 43	dBm/15 kHz	-101.0	-105.0	-82.0	-86.0	-112	-115.2	
	Band 41, [44]						-111	-114.2	
	Bands 33, 34, 35, 36, 37, 38, 39, 40			I	1		-82	.25	
Io ^{Note4}	Band 42, 43	dBm/9 MHz	-71	.05	-52	.05	-81	.25	
Band 41, [44]							-80.25		
\hat{E}_s/N_{oc}	•	dB	6.0	2.0	6.0	2.0	3.0	-0.20	
Propagation c	ondition	-	AW	GN	AW	GN	AW	GN	
	special subframe and	unlink-downlink c							

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over

subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Table 9.1.2.1.5-3: RSRP TDD Intra frequency absolute accuracy requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2 All bands	Test 3	
Lowest reported value (Cell 2)	RSRP 28	RSRP_45	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_17
Lowest reported value (Cell 2)	NONF_20	NONF_40	Bands 42, 43 Bands 41, 44	RSRP_18 RSRP_19
Highest reported value (Cell 2)	RSRP_43	RSRP_64	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_32
iriigilest reported value (Celi 2)	R5RP_43	K5KP_64	Bands 42, 43 Bands 41, 44	RSRP_33 RSRP_34
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3	
Lowest reported value (Cell 2)	DODD of	RSRP_42	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_14
Lowest reported value (Cell 2)	RSRP_25	RSKF_42	Bands 42, 43 Bands 41, 44	RSRP_15 RSRP_16
Highest reported value (Call 2)	DSDD 46	RSRP_67	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_35
Highest reported value (Cell 2)	RSRP_46	K3KP_0/	Bands 42, 43 Bands 41, 44	RSRP_36 RSRP_37

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.2.2 TDD Intra Frequency Relative Accuracy of RSRP

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.1.2.2.1 Test purpose

To verify that the TDD intra-frequency relative accuracy measurement of RSRP is within the specified limit for all bands.

9.1.2.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.1.2.2.3 Minimum conformance requirements

The relative accuracy of RSRP is defined as the RSRP measured from one cell compared to the RSRP measured from another cell on the same frequency.

The accuracy requirements in Table 9.1.2.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

 $RSRP1,2|_{dBm}$ according to Annex I.3.8 for a corresponding Band.

Table 9.1.2.2.3-1: RSRP TDD Intra frequency relative accuracy

Accı	uracy		Conditions			
Normal	Extreme	Es/lot Note	lo Note 1 range			
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±2	±3	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 3	-50	
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50	
			29 Note 5	-118	-50	
			25	-117.5	-50	
±3	±3	≥-6 dB	Note 4	Note 4	Note 4	

- NOTE 1: lo is assumed to have constant EPRE across the bandwidth.
- NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.
- NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.2.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.2, clause 9.1.4 and A.9.1.2.

9.1.2.2.4 Test description

9.1.2.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS and AWGN noise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A Figure A. 20.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.2.2.4.3.
- 4. All cells are in the same carrier frequency. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.2.2.4.2 Test procedure

- 1. Ensure that the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.2.2.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.

- 6. SS shall check the reported RSRP value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRP measurement value for Cell 2 is compared to the reported RSRP measurement value for Cell 1 for each MeasurementReport message according to Table 9.1.2.2.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.2.2.5-2 as appropriate.

9.1.2.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.1.2.2.4.3-1: Common Exception messages for RSRP TDD intra frequency relative accuracy test requirement

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.3.5-1				
·	Table H.3.5-3				

Table 9.1.2.2.4.3-2: *MeasResults*: Additional RSRP TDD intra frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.2.2.4.3-3: MeasResultListEUTRA: Additional RSRP TDD intra frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5				
Information Element	Value/remark	Comment	Condition	
MeasResultsListEUTRA ::= SEQUENCE (SIZE				
(1maxCellReport)) OF SEQUENCE {				
physCellId	physCellId of Cell2			
measResult SEQUENCE {				
rsrpResult		According to		
		specific test		
rsrqResult	Not present			
}				
]				

9.1.2.2.5 Test requirement

Table 9.1.2.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD intra-frequency relative accuracy test shall meet the reported values test requirements in table 9.1.2.2.5-3. The mapping of measured quantity is defined in Table 9.1.2.2.5-3. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.2.2.5-1: Void

Table 9.1.2.2.5-2: RSRP TDD Intra frequency relative accuracy test parameters

Parameter		Unit	Test 1		Test 2		Test 3		
			Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
E-UTRARF Channel Number			1		1		1		
BW _{channel}		MHz	10			10		10	
Special subframe configuration Notes			6		6		6		
Uplink/downlin	Uplink/downlink configuration Note1		1		1		1		
Measurement bandwidth		$n_{{\scriptscriptstyle PRB}}$	22—27		22—27		22—27		
PDSCH Reference measurement channel defined in A.1.2			R.0 TDD	-	R.0 TDD	-	R.0 TDD	-	
PDSCH allocation		n_{PRB}	13—36	-	13—36	-	13—36	-	
PDCCH/PCFIC	PDCCH/PCFICH/PHICH Reference								
	channel defined in		R.6	TDD	R.6 TDD		R.6 TDD		
(OP.1 TDD) an	s defined in D.2.1 nd D.2.2 (OP.2 TDD)		OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD	
PBCH_RA PBCH_RB									
PSS_RA SSS_RA	-								
PCFICH RB									
PHICH_RA									
PHICH_RB		dB	0	0	0	0	0	0	
PDCCH_RA				0				J	
PDCCH RB									
PDSCH_RA									
PDSCH_RB									
OCNG RA ^{Note2}									
OCNG_RB ^{NOIE2}	<u> </u>								
$N_{oc}^{ m Note3}$	Bands 33, 34, 35, 36, 37, 38, 39, 40	- dBm/15 kHz	-106.0	-106.0	-88.0	-88.0	-116.0 -115.00		
	Band 42, 43								
<u> </u>	Band 41, [44]						-114	1.00	
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	1.88	-4.97	1.88	-4.97	-0.01	-4.76	
RSRP ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40	- dBm/15 kHz	-100.0	-104.0	-82.0	-86.0	-113.0	-116.0	
	Band 42, 43						-112.00	-115.00	
	Band 41, [44]						-111.00	-114.00	
Noted	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/9 MHz	-70.05	-70.05	-52.05	-52.05	-82.20		
Io ^{Note4}	Band 42, 43						-81	.20	
	Band 41, [44]						-80		
\hat{E}_s/N_{oc}	•	dB	6.0	2.0	6.0	2.0	3.0	0.0	
Propagation condition		-	AWGN		AW	AWGN		AWGN	
1 Topagation condition		l	AVVGIN		AVVGIN		AVVGIN		

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over

subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled. Note 4: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.2.2.5-3: RSRP TDD Intra frequency relative accuracy requirements for the reported values

	Test 1	Test 2		Test 3			
	All bands	All bands	Bands 33, 34, 35, 36, 37, 38, 39, 40	Band 42, 43	Band 41		
Normal Conditions							
Lowest reported value (Cell 2)	RSRP_x-9	RSRP_x-9	RSRP_x-8	RSRP_x-8	RSRP_x-8		
Highest reported value (Cell 2)	RSRP_x+1	RSRP_x+1	RSRP_x+2	RSRP_x+2	RSRP_x+2		
Extreme Conditions							
Lowest reported value (Cell 2)	RSRP_x-9	RSRP_x-9	RSRP_x-8	RSRP_x-8	RSRP_x-8		
Highest reported value (Cell 2)	RSRP_x+1	RSRP_x+1	RSRP_x+2	RSRP_x+2	RSRP_x+2		
RSRP_x is the reported value of	RSRP_x is the reported value of Cell 1						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.3 FDD Interfrequency RSRP Accuracy

9.1.3.1 FDD - FDD Inter Frequency Absolute RSRP Accuracy

9.1.3.1.1 Test purpose

To verify that the FDD inter-frequency absolute RSRP measurement accuracy is within the specified limit for all bands.

9.1.3.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.1.3.1.3 Minimum conformance requirements

The absolute accuracy of RSRP is defined as the RSRP measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in table 9.1.3.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

 $RSRP|_{dBm}$ according to Annex I.3.3 for a corresponding Band.

Table 9.1.3.1.3-1: RSRP	FDD Inter fr	requency	absolute	accuracy
-------------------------	--------------	----------	----------	----------

Accı	ıracy	Conditions lo Note 1 range					
Normal	Extreme	Ês/lot	le				
condition	condition	LS/IOU	E-UTRA operating bands	Mini	mum lo	Maximum lo	
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70	
			9, 42, 43	-120	N/A	-70	
			28	-119.5	N/A	-70	
±6	±9	≥-6 dB	2, 5, 7, 27, 41, 44	-119	N/A	-70	
_•	_0	0 0.2	26	-118.5 Note 2	N/A	-70	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 4	-118	N/A	-70	
			25	-117.5	N/A	-70	
±8	±11	≥-6 dB	Note 3	N/A	-70	-50	

- NOTE 1: lo is assumed to have constant EPRE across the bandwidth.
- NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 5: The condition level is increased by Δ >0, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.1.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.1, clause 9.1.4 and A.9.1.3.

9.1.3.1.4 Test description

9.1.3.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.3.1.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.3.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.3.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ UE\, shall\, transmit\, periodically\, Measurement\, Report\, \, messages.$

- 6. SS shall check RSRP reported value in Measurement Report messages. The RSRP value of Cell 2 reported by the UE is compared to the actual RSRP according to Table 9.1.3.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.3.1.5-2 as appropriate.

9.1.3.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.3.1.4.3-1: Common Exception messages for RSRP FDD Inter frequency absolute accuracy test requirement

Default Message Contents				
Common contents of system information blocks exceptions				
elements contents exceptions	Table H.3.1-1 Table H.3.5-2 Table H.3.5-3			

Table 9.1.3.1.4.3-2: *MeasResults*: Additional RSRP FDD Inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.3.1.4.3-3: MeasResultListEUTRA: Additional RSRP FDD Inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
meas Result SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present		
}			
}			

9.1.3.1.5 Test requirement

Table 9.1.3.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD inter-frequency absolute accuracy test shall meet the reported values test requirements in table 9.1.3.1.5-3.

Table 9.1.3.1.5-1: Void

Table 9.1.3.1.5-2: RSRP FDD - FDD Inter frequency absolute accuracy test parameters

Parameter		l leit	Test 1		Test 2	
		Unit	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number	NALL -	1	2	1	2
BW _{channel} Gap Pattern Id		MHz	10 0	10	10 0	10
-	ما دار در اما در اما در در ا		-			
Measurement b		n_{PRB}	22-	-21	22—27	
PDSCH Reference measurement channel defined in A.1.1			R.0 FDD	-	R.0 FDD	-
PDSCH allocat			13—36	_	13—36	_
PDCCH/PCFIC		n_{PRB}	10 00		10 00	
	surement channel		R.6 I	FDD	R.6 I	FDD
defined in A.2.1						
	s defined in D.1.1		OP.1	OP.2	OP.1	OP.2
(OP.1 FDD) and FDD)	a D.1.2 (OP.2		FDD	FDD	FDD	FDD
PBCH_RA						
PBCH_RB						
PSS_RA						
SSS_RA						
PCFICH_RB PHICH_RA						
PHICH_RB		dB	0	0	0	0
PDCCH_RA						
PDCCH_RB						
PDSCH_RA PDSCH_RB						
OCNG_RA Note						
OCNG_RB Note						
	Bands 1, 4, 6, 10,					
	11, 18, 19, 21, 23 and 24	dBm/15 kHz	-89.25	-89.25	$\begin{array}{c} (N_{oc} \\ \text{for} \\ \text{Channel} \\ \text{2 +8dB)} \end{array}$	-117
	Band 9					-116
37	Band 28					-115.5
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26					-115
	and 27 Note 5					- 110
	Bands 3, 8, 12, 13, 14, 17, 20, 22					-114
	and 29 Note 6					114
	Band 25					-113.5
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	10.00	10.00	13.00	-3.20
s / ot	Bands 1, 4, 6, 10,					
	11, 18, 19, 21, 23					-120.20
	and 24					440.55
	Band 9 Band 28				(RSRP	-119.20 -118.70
RSRP ^{Note3}	Bands 2 5 7 26	dBm/15 kHz	-79.25	-79.25	for Cell 2	
	and 27 Note 5	GDIII, 10 KI 12	70.20	7 0.20	+24.2dB	-118.20
	Bands 3, 8, 12,)	
	13, 14, 17, 20, 22					-117.20
	and 29 Note 6					-116.70
	Band 25 Bands 1, 4, 6, 10,					-110.70
	11, 18, 19, 21, 23					-87.52
	and 24					
	Band 9				(lo for	-86.52
lo ^{Note3}	Band 28 Bands 2, 5, 7, 26	dBm/9 MHz	-51.05	-51.05	Channel 2	-86.02
	and 27 Note 5	GENINO IVILIZ	31.00	31.00	+19.51d	-85.52
	Bands 3, 8, 12,				B)	
	13, 14, 17, 20, 22					-84.52
	and 29 Note 6					04.00
/M	Band 25		4.0	4.5	4.0	-84.02
\hat{E}_s/N_{oc}		dB	10	10	13	-3.2

Propagation condition		-	AWGN	AWGN		
Note 1:						
	transmitted power spectra					
Note 2:	Interference from other ce					
	to be constant over subca	arriers and time ar	nd shall be modelled a	as AWGN of		
	appropriate power for N_{oc} to be fulfilled.					
Note 3:	RSRP and lo levels have		n other parameters fo	r information		
	purposes. They are not se	ettable parameter	s themselves.			
Note 4:	RSRP minimum requirem	ents are specified	l assuming independe	ent interference and		
	noise at each receiver and					
Note 5:	For Band 26, the tests sha			ncy of the assigned		
	E-UTRA channel bandwid	dth within 865-894	l MHz.			
Note 6:	Band 29 is used only for E	E-UTR A carrier ag	gregation with other	E-UTRAbands.		

Table 9.1.3.1.5-3: RSRP FDD Inter frequency absolute accuracy requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2	
	741 Barras	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_13
		Band 9	RSRP_14
Lowest reported value (Cell 2)	RSRP_52	Band 28	RSRP_14
Lowest reported value (Cell 2)	K5KP_52	Bands 2, 5, 7, 26 and 27	RSRP_15
		Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_16
		Band 25	RSRP_16
		Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_28
Highest reported value (Cell 2)		Band 9	RSRP_29
	RSRP_71	Band 28	RSRP_29
		Bands 2, 5, 7, 26 and 27	RSRP_30
		Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_31
		Band 25	RSRP_31
E 4 0 1343	Test 1	Test 2	
Extreme Conditions	All bands	Test 2	
Extreme Conditions		Test 2 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_10
Extreme Conditions		Bands 1, 4, 6, 10, 11, 18,	RSRP_10 RSRP_11
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_11 RSRP_11
Lowest reported value (Cell 2)		Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9	RSRP_11
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_11 RSRP_11
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17,	RSRP_11 RSRP_11 RSRP_12
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_11 RSRP_11 RSRP_12 RSRP_13
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18,	RSRP_11 RSRP_11 RSRP_12 RSRP_13 RSRP_13
Lowest reported value (Cell 2)	All bands RSRP_49	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Bands 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_11 RSRP_11 RSRP_12 RSRP_13 RSRP_13 RSRP_31
	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Bands 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27	RSRP_11 RSRP_11 RSRP_12 RSRP_13 RSRP_13 RSRP_31 RSRP_32
Lowest reported value (Cell 2)	All bands RSRP_49	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_11 RSRP_11 RSRP_12 RSRP_13 RSRP_13 RSRP_31 RSRP_31 RSRP_32 RSRP_32

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.3.2 FDD - FDD Inter Frequency Relative Accuracy of RSRP

9.1.3.2.1 Test purpose

To verify that the FDD inter-frequency relative accuracy measurement of RSRP is within the specified limit for all bands.

9.1.3.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.1.3.2.3 Minimum conformance requirements

The relative accuracy of RSRP in inter frequency case is defined as the RSRP measured from one cell compared to the RSRP measured from another cell on a different frequency.

The accuracy requirements in table 9.1.3.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|_{dBm} according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \right|_{dBm} \le 27dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 dB$

Table 9.1.3.2.3-1: RSRP FDD Inter frequency relative accuracy

Acci	uracy	Conditions					
Normal	Extreme	Es/lot Note	lo Note 1 range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±6	±6	>-6 dB	2, 5, 7, 27, 41, 44	-119	-50		
_0		0 0.2	26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 4	-118	-50		
			25	-117.5	-50		

NOTE 1: Io is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 5: The condition level is increased by Δ>0, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.1.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.2, clause 9.1.4 and A.9.1.3.

9.1.3.2.4 Test description

9.1.3.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.3.2.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.3.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.3.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRP value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.3.2.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.3.2.5-2 as appropriate.

9.1.3.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.3.2.4.3-1: Common Exception messages for RSRP FDD Inter frequency relative accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-2			
-	Table H.3.5-3			

Table 9.1.3.2.4.3-2: MeasResults: Additional RSRP FDD Inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.3.2.4.3-3: MeasResultListEUTRA: Additional RSRP FDD Inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present	Specific test	
}			
}			

9.1.3.2.5 Test requirement

Table 9.1.3.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD inter-frequency relative accuracy test shall meet the reported values test requirements in table 9.1.3.2.5-3.

Table 9.1.3.2.5-1: Void

Table 9.1.3.2.5-2: RSRP FDD - FDD Inter frequency relative accuracy test parameters

			Tes	et 1	Too	st 2
	rameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number		1	2	1	2
BW _{channel}		MHz	10	10	10	10
Gap Pattern Id			0 -		0 -	
Measurement b		n_{PRB}	22—27		22—27	
PDSCH Reference measurement channel defined in A.1.1			R.0 FDD	-	R.0 FDD	-
PDSCH allocat		n_{PRB}	13—36	-	13—36	-
PDCCH/PCFIC						
	surement channel		R.6	FDD	R.6	FDD
defined in A.2.1	s defined in D.1.1			1		1
(OP.1 FDD) an			OP.1	OP.2	OP.1	OP.2
FDD)	u D.11.2 (O1 .2		FDD	FDD	FDD	FDD
PBCH_RA						
PBCH_RB						
PSS_RA						
SSS_RA						
PCFICH_RB						
PHICH_RA				0	0	0
PHICH_RB		dB	0			
PDCCH_RA						
PDCCH_RB PDSCH_RA						
OCNG_RA	PDSCH_RB					
OCNG_RB Note						
00110_112	Bands 1, 4, 6, 10,					
	11, 18, 19, 21, 23			-89.25	$\begin{array}{c} (N_{oc} \\ \text{ for } \\ \text{Channel } \\ \text{2 +7dB)} \end{array}$	-117
	and 24					
	Band 9					-116
$N_{oc}^{ m Note2}$	Band 28		-89.25			-115.5
TV _{oc}	Bands 2, 5, 7, 26 and 27 Note 5	dBm/15 kHz				-115
	Bands 3, 8, 12,					
	13, 14, 17, 20, 22					-114
	and 29 Note 6					
	Band 25					-113.5
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	•	dB	10.00	10.00	13.00	-3.20
S/ Tot	Bands 1, 4, 6, 10,	<u> </u>				0.20
	11, 18, 19, 21, 23					-120.20
	and 24					. 20.20
	Band 9				(RSRP	-119.20
	Band 28				for Cell	-118.70
RSRP ^{Note3}	Bands 2, 5, 7, 26	dBm/15 kHz	-79.25	-79.25	2	-118.20
	and 27 Note 5				+23.2dB	-110.20
	Bands 3, 8, 12,)	
	13, 14, 17, 20, 22					-117.20
	and 29 Note 6					440.70
	Band 25					-116.70
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23					-87.52
	and 24				(lo for Channel	-01.32
lo ^{Note3}	Band 9	dBm/9 MHz	-51.05	-51.05	Channel 2	-86.52
	Band 28				+18.51d	-86.02
	Bands 2 5 7 26				B)	
	and 27 Note 5					-85.52
			I	<u> </u>	I	1

	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 Note 6					-84.52
	and 29 Band 25					-84.02
$\hat{\mathbf{r}}$ /N		dB	10	10	13	-3.2
\hat{E}_s/N_{oc}		αв	10	10	13	-3.2
Propagation	on condition	-	AW	GN	AW	GN
Note 1:	OCNG shall be used sucl	h that both cells ai	e fully allo	cated and	a constant	total
	transmitted power spectra	,		,		
Note 2:	Interference from other ce	ells and noise sou	rces not sp	ecified in t	the test is a	assum ed
	to be constant over subca	arriers and time ar	nd shall be	modelled a	as AWGN o	of
	appropriate power for N_{α}	pc to be fulfilled.				
Note 3:	RSRP and lo levels have	been derived from	n other par	ameters fo	r informati	on
	purposes. They are not se	ettable parameters	s themselv	es.		
Note 4:	RSRP minimum requirem	ents are specified	l assuming	independe	ent interfer	ence and
	noise at each receiver antenna port.					
Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned						
	E-UTRA channel bandwid	dth within 865-894	HMHz.			
Note 6:	Band 29 is used only for E	E-UTR A carrier ag	gregation	with other	E-UTRAb	ands.

Table 9.1.3.2.5-3: RSRP FDD Inter frequency relative accuracy requirements for the reported values

	Test 1 All bands	Test 2 All bands
Normal Conditions		
Lowest reported value (Cell 2)	RSRP_(x - 9)	RSRP_(x - 32)
Highest reported value (Cell 2)	RSRP_(x + 9)	RSRP_(x - 16)
Extreme Conditions		
Lowest reported value (Cell 2)	RSRP_(x - 9)	RSRP_(x - 32)
Highest reported value (Cell 2)	RSRP_(x + 9)	RSRP_(x - 16)
RSRP_x is the reported value of	f Cell 1	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.4 TDD Interfrequency RSRP Accuracy

9.1.4.1 TDD - TDD Inter Frequency Absolute RSRP Accuracy

9.1.4.1.1 Test purpose

To verify that the TDD inter-frequency absolute RSRP measurement accuracy is within the specified limit for all bands.

9.1.4.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bits 16 25.

9.1.4.1.3 Minimum conformance requirements

The absolute accuracy of RSRP is defined as the RSRP measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in Table 9.1.4.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.3 for a corresponding Band.

Accı	ıracy	Conditions						
Normal	Extreme	Ês/lot	le	lo ^{∾ote ⊤} range				
condition	condition	L3/10t	E-UTRA operating bands	Mini	mum lo	Maximum lo		
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70		
					9, 42, 43	-120	N/A	-70
			28	-119.5	N/A	-70		
+6	±9	≥-6 dB	2, 5, 7, 27, 41, 44	-119	N/A	-70		
		= 0 db	_ 5 45	26	-118.5 Note 2	N/A	-70	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 4	-118	N/A	-70		
			25	-117.5	N/A	-70		
±8	±11	≥-6 dB	Note 3	N/A	-70	-50		

- NOTE 1: Io is assumed to have constant EPRE across the bandwidth.
- NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 5: The condition level is increased by Δ >0, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.2.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.1, clause 9.1.4 and A.9.1.4.

9.1.4.1.4 Test description

9.1.4.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.4.1.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.4.1.4.2 Test procedure

- 1. Ensure that the UE is in State 3A -RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.4.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5.\ UE\,shall\,transmit\,periodically\,\,Measurement\,Report\,\,messages.$

- 6. SS shall check the reported RSRP value in MeasurementReport messages. The RSRP value of Cell 2 reported by the UE is compared to the actual RSRP value according to Table 9.1.4.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.4.1.5-2 as appropriate.

9.1.4.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.1.4.1.4.3-1: Common Exception messages for RSRP TDD - TDD Inter frequency absolute accuracy test requirement

Default Message Contents				
Common contents of system information blocks exceptions				
Default RRC messages and information elements contents exceptions	Table H.3.1-1 Table H.3.5-2 Table H.3.5-3			

Table 9.1.4.1.4.3-2: *MeasResults*: Additional RSRP TDD - TDD Inter frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultLis tEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.4.1.4.3-3: MeasResultListEUTRA: Additional RSRP TDD - TDD Inter frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas Results LlstEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId	INTEGER (0503)	
measResult SEQUENCE {			
rsrpResult		According to	
		specific test	
rsrqResult	Not present		
}			
}			

9.1.4.1.5 Test requirement

Table 9.1.4.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD inter-frequency absolute accuracy test shall meet the reported values test requirements in table 9.1.4.1.5-3.

Table 9.1.4.1.5-1: Void

Table 9.1.4.1.5-2: RSRP TDD-TDD Inter frequency absolute accuracy test parameters

Parameter		Unit	Tes	st 1	Test 2	
		Offic	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRA RF Char	nnel Number		1	2	1	2
BW _{channel}	Noted	MHz	10 10		10	10
Special subframe	configuration Note1		6		6	
	Uplink-dow nlink configuration ^{Note1}			1	1	
Gap Pattern Id	Gap Pattern Id		0 -		0 -	
Measurement ba	ndw idth	n_{PRB}	22-	–27	22-	–27
PDSCH Reference channel defined in			R.0 TDD	-	R.0 TDD	-
PDSCH allocation	n	n_{PRB}	13—36	-	13—36	-
PDCCH/PCFICH	/PHICH Reference		P6	TDD	R.6	רחח
	annel defined in A.2.2					
OCNG Patterns of TDD) and D.2.2 (defined in D.2.1 (OP.1 OP 2 TDD)		OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD
PBCH RA	01.2 100)		.55	100	.55	100
PBCH RB						
PSS_RA						
SSS_RA		1				
PCFICH_RB		1				
PHICH_RA						
PHICH_RB		dB	0	0	0	0
PDCCH_RA						
PDCCH_RB						
PDSCH_RA						
PDSCH_RB						
OCNG_RA Note2						
OCNG_RB Note2						
	Bands 33, 34, 35, 36, 37, 38, 39, 40				(N_{oc}	-117
$N_{oc}^{ m Note3}$	Bands 42, 43	dBm/15 kHz	-89.25	-89.25	for	-116
	Bands 41, 44				Channel 2 +8dB)	-115
É	$E_{ m s}/I_{ m ot}$	dB	10.00	10.00	13.00	-3.20
	Bands 33, 34, 35, 36, 37, 38, 39, 40				(RSRP for Cell	-120.20
RSRP ^{Note4}	Bands 42, 43	dBm/15 kHz	-79.25	-79.25	2	-119.20
	Bands 41, 44				+24.2dB)	-118.20
	Bands 33, 34, 35, 36, 37, 38, 39, 40				(lo for Channel	-87.52
lo ^{Note4}	Bands 42, 43	dBm/9 MHz	-51.05	-51.05	2 +19.51d	-86.52
	Bands 41, 44				H19.51d B)	-85.52
	N_{oc}	dB	10	10	13	-3.2
Propaga	tion condition	-	AW	/GN	AW	'GN
		P 1 1 P T		_	11 40 4	1 4 0

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in TS 36.211.

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of

appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.4.1.5-3: RSRP TDD-TDD Inter frequency absolute accuracy requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2	
Lowest reported value (Call 2)	RSRP_52	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_13
Lowest reported value (Cell 2)	KSKP_52	Bands 42, 43	RSRP_14
		Bands 41, 44	RSRP_15
High act was arted value (Call 2)	DCDD 74	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_28
Highest reported value (Cell 2)	RSRP_71	Bands 42, 43	RSRP_29
		Bands 41, 44	RSRP_30
		Tast 2	
Extreme Conditions	Test 1 All bands	Test 2	
	All bands	Test 2 Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_10
Extreme Conditions Lowest reported value (Cell 2)		Bands 33, 34, 35, 36, 37,	RSRP_11
	All bands	Bands 33, 34, 35, 36, 37, 38, 39, 40	_
Lowest reported value (Cell 2)	All bands RSRP_49	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43	RSRP_11
	All bands	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Bands 41, 44 Bands 33, 34, 35, 36, 37,	RSRP_11 RSRP_12

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.4.2 TDD - TDD Inter Frequency Relative Accuracy of RSRP

9.1.4.2.1 Test purpose

To verify that the TDD inter-frequency relative accuracy measurement of RSRP is within the specified limit for all bands.

9.1.4.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.1.4.2.3 Minimum conformance requirements

The relative accuracy of RSRP in inter frequency case is defined as the RSRP measured from one cell compared to the RSRP measured from another cell on a different frequency.

The accuracy requirements in Table 9.1.4.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2_{dBm} according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le 27 dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.1.4.2.3-1: RSRP TDD-TDD Inter frequency relative accuracy

Accı	uracy	Conditions				
Normal	Extreme	Ës/lot Note	lo Note 1 range			
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
		> 0 -ID	28	-119.5	-50	
±6	±6	≥-6 dB	2, 5, 7, 27, 41, 44	-119	-50	
			26	-118.5 Note 3	-50	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 4	-118	-50	
			25	-117.5	-50	

NOTE 1: Io is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 5: The condition level is increased by Δ >0, when applicable, as described in TS 36.133 [4] Sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.2.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.2, clause 9.1.4 and A.9.1.4.

9.1.4.2.4 Test description

9.1.4.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.O.
- 3. Message contents are defined in clause 9.1.4.2.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.4.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.4.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.

- 6. SS shall check the reported RSRP value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.4.2.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.4.2.5-2 as appropriate.

9.1.4.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.1.4.2.4.3-1: Common Exception messages for RSRP TDD - TDD Inter frequency relative accuracy test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.3.5-2		
·	Table H.3.5-3		

Table 9.1.4.2.4.3-2: *MeasResults*: Additional RSRP TDD - TDD Inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		According to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m e as ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.4.2.4.3-3: MeasResultListEUTRA: Additional RSRP TDD - TDD Inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId	INTEGER (0503)	
measResult SEQUENCE {			
rsrpResult		According to specific test	
rsrqResult	Not present		
}			
}			

9.1.4.2.5 Test requirement

Table 9.1.4.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD inter-frequency relative accuracy test shall meet the reported values test requirements in table 9.1.4.2.5-3. The mapping of measured quantity is defined in Table 9.1.4.2.5-3. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.4.2.5-1: Void

Table 9.1.4.2.5-2: RSRP TDD-TDD Inter frequency relative accuracy test parameters

Pa	rameter	Unit	Test 1		Test 2	
			Cell 1	Cell 2	Cell 1	Cell 2
E-UTRA RF Channel Number			1	2	1	2
BW _{channel}	. Note1	MHz	10	10	10	10
Special subframe	e configuration Note1		(5
Uplink-dow nlink	configuration Note 1			1		1
Gap Pattern Id			0	-	0	-
Measurement ba	ndw idth	n_{PRB}		–27	22-	–27
PDSCH Reference channel defined			R.0 TDD	-	R.0 TDD	-
PDSCH allocation		n_{PRB}	13—36	-	13—36	-
	/PHICH Reference		R.6	TDD	R6.	TDD
	annel defined in A.2.2		_		_	
TDD) and D.2.2 (defined in D.2.1 (OP.1		OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD
PBCH RA	OF.2 100)		טטו	וטט	טטו	100
PBCH RB						
PSS RA		-			0	0
SSS_RA			0	0		
PCFICH_RB		dB				
PHICH_RA						
PHICH_RB						
PDCCH_RA						
PDCCH_RB						
PDSCH_RA						
PDSCH_RB						
	OCNG_RA Note2					
OCNG_RB Note2						
	Bands 33, 34, 35, 36, 37, 38, 39, 40				(N_{oc}	-117
$N_{oc}^{ m Note3}$	Bands 42, 43	dBm/15 kHz	-89.25	-89.25	for	-116
00	Bands 41, 44	-			Channel	-115
	,				2 +7dB)	
F	$\hat{E}_{\rm s}/{ m I}_{ m ot}$	dB	10.00	10.00	13.00	-3.20
DO C Note4	Bands 33, 34, 35, 36, 37, 38, 39, 40	ID (/=:::	70.05	70.07	(RSRP for Cell	-120.20
RSRP ^{Note4}	Bands 42, 43	dBm/15 kHz	-79.25	.25 -79.25	2 +23.2dB	-119.20
	Bands 41, 44)	-118.20
lo ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/9 MHz	54.05	54.05	(lo for Channel	-87.52
10.130	Bands 42, 43		-51.05	05 -51.05	2 +18.51d	-86.52
	Bands 41, 44				B)	-85.52
\hat{E}	$_{s}/N_{oc}$	dB	10	10	13	-3.2
	tion condition	-	AW			GN
Note 1. For	anadal cubframa and	Lunlink downlink	configuration	nc caa Ta	bloc 12 1	and 4.2

- Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in TS 36.211.
- Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of
 - appropriate power for N_{oc} to be fulfilled.
- Note 4: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.4.2.5-3: RSRP TDD-TDD Inter frequency relative accuracy requirements for the reported values

	Test 1	Test 2
	All bands	All bands
Nomal Conditions		
Lowest reported value (Cell 2)	RSRP_(x - 9)	RSRP_(x - 32)
Highest reported value (Cell 2)	RSRP_(x + 9)	RSRP_(x - 16)
Extreme Conditions		
Lowest reported value (Cell 2)	RSRP_(x - 9)	RSRP_(x - 32)
Highest reported value (Cell 2)	RSRP_(x + 9)	RSRP_(x - 16)
RSRP_x is the reported value of	Cell 1	•

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.5 FDD - TDD Interfrequency RSRP Accuracy

9.1.5.1 FDD - TDD Inter Frequency Absolute RSRP Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.1.5.1.1 Test purpose

To verify that the FDD - TDD inter-frequency absolute RSRP measurement accuracy is within the specified limit for all bands.

9.1.5.1.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bit 25.

9.1.5.1.3 Minimum conformance requirements

The absolute accuracy of RSRP is defined as the RSRP measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in table 9.1.5.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.3 for a corresponding Band.

Table 9.1.5.1.3-1: RSRP FDD - TDD Inter frequency absolute accuracy

Accı	ıracy		Conditions			
Normal	Extreme	Ês/lot	le	o Note 1 range		
condition	condition	LS/IOU	E-UTRA operating bands	Mini	mum lo	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70
			9, 42, 43	-120	N/A	-70
			28	-119.5	N/A	-70
±6	±9	≥-6 dB	2, 5, 7, 27, 41, [44]	-119	N/A	-70
			26	-118.5 Note 2	N/A	-70
			3, 8, 12, 13, 14, 17, 20, 22	-118	N/A	-70
			29 Note 4	-118	N/A	-70
			25	-117.5	N/A	-70
±8	±11	≥-6 dB	Note 3	N/A	-70	-50

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

- NOTE 2: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.5.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.5.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.1, clause 9.1.4 and A.9.1.5.

9.1.5.1.4 Test description

9.1.5.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.5.1.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is FDD cell and Cell 2 is TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.5.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.5.1.5-1 and Table 9.1.5.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check RSRP reported value in Measurement Report messages. The RSRP value of Cell 2 reported by the UE is compared to the actual RSRP according to Table 9.1.5.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.5.1.5-1 and Table 9.1.5.1.5-2 as appropriate.

9.1.5.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.5.1.4.3-1: Common Exception messages for RSRP FDD-TDD Inter frequency absolute accuracy test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.3.5-2		
·	Table H.3.5-3		

Table 9.1.5.1.4.3-2: *MeasResults*: Additional RSRP FDD-TDD Inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the	
		measurement id for	
		the reporting being	
		performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult		Set according to	
		specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.5.1.4.3-3: MeasResultListEUTRA: Additional RSRP FDD-TDD Inter frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity	Cell 2	
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present		
}			
}			

9.1.5.1.5 Test requirement

Table 9.1.5.1.5-1 and Table 9.1.5.1.5-2 define the primary level settings including test tolerances for all tests.

Each RSRP FDD-TDD inter-frequency absolute accuracy test shall meet the reported values test requirements in table 9.1.5.1.5-3.

Table 9.1.5.1.5-1: RSRP FDD—TDD Inter frequency test parameters (FDD Cell1)

Parameter Unit		Test 1		Tes	t 2
	Unit	Cell 1		Cel	l 1
E-UTRARF Channel Number			1		
BW _{channel}	MHz	10		10	
Gap Pattern Id		C		0	
Measurement bandwidth	n_{PRB}	22–	-27	22—27	
PDSCH Reference measurement channel defined in A.3.1.1.1		R.0 F	-DD	R.0 F	DD
PDSCH allocation	n_{PRB}	13–	-36	13—	-36
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.3.1.2.1		R.6 F	R.6 FDD		-DD
OCNG Patterns defined in A.3.2.1.1 (OP.1 FDD) and A.3.2.1.2 (OP.2 FDD)		OP.1 FDD		OP.1 FDD	
PBCH_RA					
PBCH_RB PSS_RA					
SSS RA					
PCFICH RB					
PHICH RA					
PHICH_RB	dB	0	0	0	0
PDCCH_RA	u D				
PDCCH_RB					
PDSCH_RA					
PDSCH_RB					
OCNG_RANote1					
OCNG_RBNote					
$N_{oc}^{ m Note2}$	dBm/15 kHz	-88.95		-10)4
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	10		13	
RSRP ^{INOTE3}	dBm/15 kHz	-78.95		-91	
Io ^{Note3}	dBm/9 MHz	-50.75		-63	.01
\hat{E}_s/N_{oc}	dB	10		13	
Propagation condition	-	AW	GN	AW	GN
Note 1: OCNG shall be used such	that both cells are	e fully alloc	ated and a	constant t	otal

transmitted power spectral density is achieved for all OFDM symbols.

Interference from other cells and noise sources not specified in the test is assumed

Note 2: to be constant over subcarriers and time and shall be modelled as AWGN of

appropriate power for $N_{\it oc}$ to be fulfilled.

RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Note 3:

RSRP minimum requirements are specified assuming independent interference and Note 4: noise at each receiver antenna port.

Table 9.1.5.1.5-2: RSRP FDD—TDD Inter frequency test parameters (TDD cell2)

		Test 1	Test 2		
Parameter	Unit	Cell 2	Cell 2		
E-UTRARF Channel Number		2	2		
BW _{channel}	MHz	10	10		
Special subframe configuration Notes		6	6		
Uplink-downlink configuration Notes		1	1		
Gap Pattern Id		-	-		
Measurement bandwidth	n_{PRB}	22—27	22—27		
PDSCH Reference measurement		_	_		
channel defined in A.3.1.1.2					
PDSCH allocation	n_{PRB}	-	-		
PDCCH/PCFICH/PHICH Reference					
measurement channel defined in		R.6 TDD	R.6 TDD		
A.3.1.2.2					
OCNG Patterns defined in		OD 0 TDD	00.0 TDD		
A.3.2.2.1 (OP.1 TDD) and A.3.2.2.2		OP.2 TDD	OP.2 TDD		
(OP.2 TDD)					
PBCH_RA PBCH_RB					
PSS_RA					
SSS_RA					
PCFICH RB					
PHICH_RA					
PHICH RB	dB	0	0		
PDCCH_RA	uБ	U	0		
PDCCH_RB					
PDSCH_RA					
PDSCH_RB					
OCNG RA ^{Note2}					
OCNG RB ^{Note2}					
N_{oc}^{Note3}	dBm/15 kHz	-88.95	-112		
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	10	-3.2		
RSRP ^{NOIE4}	dBm/15 kHz	-78.95	-115.2		
Io ^{Note4}	dBm/9 MHz	-50.75	-82.52		
\hat{E}_s/N_{oc}	dB	10	-3.2		
Propagation condition	-	AWGN	AWGN		
Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2					
in 3GPP TS 36.211. Note 2: OCNG shall be used such	that both cells are	e fully allocated and a	constant total		

- Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of

appropriate power for N_{oc} to be fulfilled.

- Note 4: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.5.1.5-3: RSRP FDD-TDD Inter frequency absolute accuracy requirements for the reported values

	Test 1	Test 2
Nomal Conditions		
Lowest reported value (Cell 2)	RSRP_52	RSRP_18
Highest reported value (Cell 2)	RSRP_71	RSRP_33
Extreme Conditions		
Lowest reported value (Cell 2)	RSRP_49	RSRP_15
Highest reported value (Cell 2)	RSRP_74	RSRP_36

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.5.2 FDD - TDD Inter Frequency Relative Accuracy of RSRP

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.1.5.2.1 Test purpose

To verify that the FDD-TDD inter-frequency relative accuracy measurement of RSRP is within the specified limit for all bands.

9.1.5.2.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bit 25.

9.1.5.2.3 Minimum conformance requirements

The relative accuracy of RSRP in inter frequency case is defined as the RSRP measured from one cell compared to the RSRP measured from another cell on a different frequency.

The accuracy requirements in table 9.1.5.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2_{dBm} according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le 27 dB$$

| Channel 1_ Io - Channel 2_ Io | $\leq 20 \, dB$

-50

-50

-118

-117.5

Table 9.1.5.2.3-1: RSRP FDD Inter frequency relative accuracy

	Conditions					
ne	Ës/lot Note	lo Note 1 range				
ion	2	E-UTRA operating bands	Minimum Io	Maximur		

Acci	uracy	Conditions			
Normal	Extreme	Es/lot Note	lo Note 1 range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±6	±6	≥-6 dB	2, 5, 7, 27, 41, [44]	-119	-50
			26	-118.5 Note 3	-50
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50

Note

lo is assumed to have constant EPRE across the bandwidth.

The parameter £s/lot is the minimum £s/lot of the pair of cells to which the requirement applies. NOTE 2:

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

29 25

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.1.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.3.2, clause 9.1.4 and A.9.1.5.

9.1.5.2.4 Test description

9.1.5.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.5.2.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is FDD cell and Cell 2 is TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.5.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.1.5.2.5-1 and Table 9.1.5.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.

- 6. SS shall check the RSRP value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.5.2.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.5.2.5-1 and Table 9.1.5.2.5-2 as appropriate.

9.1.5.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.5.2.4.3-1: Common Exception messages for RSRP FDD-TDD Inter frequency relative accuracy test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.3.5-2		
·	Table H.3.5-3		

Table 9.1.5.2.4.3-2: MeasResults: Additional RSRP FDD-TDD Inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA }	MeasResultListEUTRA		
}			

Table 9.1.5.2.4.3-3: MeasResultListEUTRA: Additional RSRP FDD-TDD Inter frequency relative accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas ResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity PhysicalCellIdentity	Cell 2	
measResult SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult	Not present		
}			
}			

9.1.5.2.5 Test requirement

Table 9.1.5.2.5-1 and Table 9.1.5.2.5-2 define the primary level settings including test tolerances for all tests.

Each RSRP FDD-TDD inter-frequency relative accuracy test shall meet the reported values test requirements in table 9.1.5.2.5-3.

Table 9.1.5.2.5-1: RSRP FDD—TDD Inter frequency test parameters (FDD Cell1)

Parameter	Parameter Unit Test 1		st 1	Tes	st 2
Farameter	Offic	Cell 1		Ce	II 1
E-UTRA RF Channel Number		1		1	
BW _{channel}	MHz	10		10	
Gap Pattern Id		()	0	
Measurement bandwidth	n_{PRB}	22-	–27	22—27	
PDSCH Reference measurement channel defined in A.3.1.1.1		R.0	FDD	R.0 FDD	
PDSCH allocation	n_{PRB}	13-	– 36	13–	-36
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.3.1.2.1		R.6	FDD	R.6 FDD	
OCNG Patterns defined in A.3.2.1.1 (OP.1 FDD) and A.3.2.1.2 (OP.2 FDD)		OP.1 FDD		OP.1 FDD	
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RANote1	dB	0	0	0	0
OCNG_RBNote N_{oc}^{Note2}	dBm/15 kHz	-88.95		-104.60	
\hat{E}_{s}/I_{ot}	dB	10.00		13.00	
RSRP ^{NOTE3}	dBm/15 kHz	-78.95		-91	.60
Io ^{Note3}	dBm/9 MHz	-50.75		-63	3.61
\hat{E}_s/N_{oc}	dB	10	.00	13	.00
Propagation condition	-	AWGN AWGN		GN	

OCNG shall be used such that both cells are fully allocated and a constant total Note 1: transmitted power spectral density is achieved for all OFDM symbols.

Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of Note 2:

appropriate power for $\frac{N_{oc}}{N_{oc}}$ to be fulfilled. RSRP and lo levels have been derived from other parameters for information Note 3: purposes. They are not settable parameters themselves.

Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.5.2.5-2: RSRP FDD—TDD Inter frequency test parameters (TDD cell2)

5	11.74	Test 1	Test 2
Parameter	Unit	Cell 2	Cell 2
E-UTRARF Channel Number		2	2
BW _{channel}	MHz	10	10
Special subframe		6	6
configuration Note1			
Uplink-downlink configuration Notes		1	1
Gap Pattern Id			-
Measurement bandwidth	n_{PRB}	22—27	22—27
PDSCH Reference measurement			
channel defined in A.3.1.1.2		<u> </u>	-
PDSCH allocation	n_{PRB}	-	-
PDCCH/PCFICH/PHICH	110		
Reference measurement channel		R.6 TDD	R.6 TDD
defined in A.3.1.2.2			
OCNG Patterns defined in			
A.3.2.2.1 (OP.1 TDD) and		OP.2 TDD	OP.2 TDD
A.3.2.2.2 (OP.2 TDD) PBCH RA			
PBCH_RB	-		
PSS_RA	-		
SSS_RA	-		
PCFICH_RB	_		
PHICH RA			
PHICH_RB	dB	0	0
PDCCH_RA			
PDCCH_RB			
PDSCH_RA			
PDSCH_RB			
OCNG_RA ^{Note2}			
OCNG_RB ^{Note2}			
$N_{oc}^{ m Note3}$	dBm/15 kHz	-88.95	-112.00
\hat{E}_{s}/I_{ot}	dB	10.00	-3.20
RSRP ^{Note4}	dBm/15 kHz	-78.95	-115.20
Io ^{Note4}	dBm/9 MHz	-50.75	-82.52
\hat{E}_s/N_{oc}	dB	10.00	-3.20
Propagation condition	-	AWGN	AWGN
Note 1: For special subframe and 2 in 3GPP TS 36.211.	l uplink-downlink c	onfigurations see Ta	bles 4.2-1 and 4.2-

OCNG shall be used such that both cells are fully allocated and a constant total Note 2: transmitted power spectral density is achieved for all OFDM symbols.

Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of Note 3:

appropriate power for $\frac{N_{oc}}{N_{oc}}$ to be fulfilled. RSRP and lo levels have been derived from other parameters for information Note 4: purposes. They are not settable parameters themselves.

Note 5: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.1.5.2.5-3: RSRP FDD-TDD Inter frequency relative accuracy requirements for the reported values

	Test 1	Test 2	
Nomal Conditions		•	
Lowest reported value (Cell 2)	RSRP_(x - 8)	RSRP_(x - 32)	
Highest reported value (Cell 2)	RSRP_(x + 8)	RSRP_(x - 16)	
Extreme Conditions		•	
Lowest reported value (Cell 2)	RSRP_(x-8)	RSRP_(x - 32)	
Highest reported value (Cell 2)	RSRP_(x + 8)	RSRP_(x - 16)	
RSRP_x is the reported value of Cell 1			

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.6 FDD RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.6.1 FDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.6.1.1 Test purpose

To verify that FDD absolute RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the FDD absolute RSRP accuracy requirements of cells on the primary component carrier and the secondary component carrier.

9.1.6.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward supporting CA.

9.1.6.1.3 Minimum conformance requirements

The FDD RSRP measurements of cells on the primary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1. The FDD RSRP measurements of cells on the secondary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1.

The accuracy requirements in table 9.1.6.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.1 for a corresponding Band.

N/A

N/A

N/A

N/A

N/A

-70

-70

-70

-70

-70

-70

-50

Normal condition

dB

±6

Accuracy

cor

±9

±11

у		Conditions				
xtreme	Ês/lot		lo ^{Note 1} range			
ndition	n E-UTRA operating bands Minimum Io		mum Io	Maximum lo		
dB	dB		dBm/15kHz	dBm/BW _{Channel}	dBm/BW _{Channel}	
		1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70	
		9, 42, 43	-120	N/A	-70	
		28	-119.5	N/A	-70	

-119

-118

-118

-117.5

N/A

-118.5 [^]

Table 9.1.6.1.3-1: RSRP FDD Intra frequency absolute accuracy

NOTE 1: Io is assumed to have constant EPRE across the bandwidth.

≥-6 dB

≥-6 dB

- NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.

2, 5, 7, 27, 41, [44]

26

3, 8, 12, 13, 14, 17, 20, 22

29 Note 4

25

Note 3

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.6.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.6.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2, clause 9.1.4, and A.9.1.6

9.1.6.1.4 Test description

9.1.6.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.6.1.4.3.
- 4. Cell 1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier and Cell 3 is the neighbouring cell on the secondary component carrier. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.6.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCell according to Annex C.0, C.1 [and C.2] for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [11], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133 [4], clauses 8.3.3.2).
- 5. Set the parameters according to Table 9.1.6.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.
- 9. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 1 and Cell 2 are compared to the actual RSRP values according to Table 9.1.6.1.5-3. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.
- 11. Repeat steps 1-10 for switched PCell/SCell scenario.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events ("Cell 1" and "Cell 2") pass for each configuration (without and with switched PCell/SCell scenario), the test passes. If one event fails, the test fails.

9.1.6.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.6.1.4.3-1: Common Exception messages for FDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.4.2-1		
	Table H.4.2-2		
	Table H.4.2-4		

9.1.6.1.5 Test requirement

Table 9.1.6.1.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP FDD absolute accuracy test shall meet the reported values test requirements in table 9.1.6.1.5-3.

Table 9.1.6.1.5-1: Void

Table 9.1.6.1.5-2: RSRP FDD absolute accuracy carrier aggregation test parameters

Test 1				Test 1		
	rameter	Unit	Cell 1	Cell 2	Cell3	
	nannel Number		1	2	2	
W _{channel}		MHz	10	10	10	
ming offset to	o cell1	μS	-	0	3μs or 92*Ts	
ime alignmer and cell 1	nt error between cell		-	≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-	
leasurement		n_{PRB}		22—27		
DSCH Referent nannel define	ence measurement ed in A.1.1		R.0 FDD	R.0 FDD	-	
DSCH alloca		n_{PRB}	13—36	13—36	-	
efined in A.2.	as urement channel 1			R.6 FDD		
DP.1 FDD) ar DD)	s defined in D.1.1 nd D.1.2 (OP.2		OP.1 FDD	OP.1 FDD	OP.2 FDD	
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RA PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RANote1 OCNG_RBNote		dB	0	0	0	
N _{oc} Note2 Noc Note2 Noc Note2 Bands 1, 4, 6, 10, 11, 18, 19, 21,23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 Note 6 and 27 Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 Band 25		dBm/15 kHz	-117 -116 -115.5 -115 -114 -113.5	(N_{oc} for Channel 1 +1dB)		
\hat{E}_{s}/I_{ot}		dB	-4.00	0.46	-5.76	
SRP ^{Note3}	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 Note 6 and 27 Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 Note 7	dBm/15 kHz	-121 -120 -119.5 -119	(RSRP for Cell 1 +8dB)	(RSRP for Cell 1 +4dB)	
	13, 14, 17, 20, 22 and 29 ^{Note 7} Band 25		-118 -117.5			

Io ^{Note3}	Bands 1, 4, 6, 10, 11, 18, 19, 21,23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 Note 6 and 27 Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7} Band 25	dBm/9 MHz	-87.76 -86.76 -86.26 -85.76 -84.76	(lo for Chanr	nel 1 +5.33dB)		
\hat{E}_s/N_{oc}		dB	-4	3	-1		
Propagat	ion condition	-		AWGN			
Note 1:	OCNG shall be used suc	h that both cells ar	e fully allocat	ed and a cons	tant total		
Note 2:	transmitted power spectral density is achieved for all OFDM symbols. 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of						
	appropriate power for N_{ac} to be fulfilled.						
Note 3:							
Note 4:							
Note 5:							
Note 6:							
Note 7: Note 8:							

Table 9.1.6.1.5-3: RSRP FDD Carrier Aggregation absolute accuracy requirements for the reported values

			Test 1			
Band of Cell 1 on Primary Component Carrier	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24	Bands 2, 5, 7, 26, 27	Band 25	Bands 28	Bands 3, 8, 12, 13, 14, 17, 20, 22	Band 9
Nomal Conditions						
Lowest reported value (Cell 1)	RSRP_12	RSRP_14	RSRP_15	RSRP_13	RSRP_15	RSRP_13
Highest reported value (Cell 1)	RSRP_27	RSRP_29	RSRP_31	RSRP_29	RSRP_30	RSRP_28
Lowest reported value (Cell 2)	RSRP_20	RSRP_22	RSRP_23	RSRP_21	RSRP_23	RSRP_21
Highest reported value (Cell 2)	RSRP_35	RSRP_37	RSRP_39	RSRP_37	RSRP_38	RSRP_36
Extreme Conditions						
Lowest reported value (Cell 1)	RSRP_9	RSRP_11	RSRP_12	RSRP_10	RSRP_12	RSRP_10
Highest reported value (Cell 1)	RSRP_30	RSRP_32	RSRP_34	RSRP_32	RSRP_33	RSRP_31
Lowest reported value (Cell 2)	RSRP_17	RSRP_19	RSRP_20	RSRP_18	RSRP_20	RSRP_18
Highest reported value (Cell 2)	RSRP_38	RSRP_40	RSRP_42	RSRP_40	RSRP_41	RSRP_39
Note: The band of Cell 1 determines the levels for both Cell 1 and Cell 2, so the reported RSRP values depend only on the band of Cell 1, and are not dependent on the band of Cell 2.						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.6.2 FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.6.2.1 Test purpose

To verify that FDD relative RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the FDD relative RSRP accuracy requirements of cells between the primary and secondary component carrier and FDD relative RSRP accuracy between the secondary component carriers.

9.1.6.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward supporting CA.

9.1.6.2.3 Minimum conformance requirements

The FDD RSRP relative measurements of cells on PCC and SCC shall meet relative accuracy requirements defined in TS 36.133 [4] clause 9.1.3.2. The FDD RSRP relative measurements of cells on the SCC shall meet relative accuracy requirements defined in TS 36.133 [4] clause 9.1.2.2.

The accuracy requirements in Table 9.1.6.2.3-1 for PCC-SCC relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.4 for a corresponding Band

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le 27 dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.1.6.2.3-1: FDD RSRP relative accuracy for PCC and SCC

Accuracy			Conditions				
Normal Extreme		Ês/lot Note	lo ^{Note 1} range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB	-	dBm/15kHz	dBm/BW _{Channel}		
±2			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	Maximum Io dBm/BW channel -50 -50 -50 -50 -50 -50 -50 Note 4		
			9, 42, 43	-120			
			28	-119.5			
	±3	≥-3 dB	2, 5, 7, 27, 41, 44	-119			
			26	-118.5 Note 3			
			3, 8, 12, 13, 14, 17, 20, 22	-118			
			29 ^{Note 5}	-118	-50		
			25	-117.5	-50		
±3	±3	≥-6 dB	Note 4	Note 4	Note 4		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Ês/lot is the minimum Ês/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the

corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The requirements in Table 9.1.6.2.3-2 for SCC relative accuracy are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.8 for a corresponding Band.

Note 4

Note 4

Table 9.1.6.2.3-2: FDD RSRP relative accuracy for SCCs						
	Conditions					
Ës/lot Note	lo ^{Note 1}	range				
2	F-IITPA operating bands	Minimum Io	May			

Accuracy		Conditions					
Normal Extreme		Es/lot Note	lo ^{Note 1} range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	dBm/BW _{Channel}		
			28	-119.5			
±2	±3 ≥	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 5	-118	-50		
			25	-117.5	-50		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

≥-6 dB

- NOTE 2: The parameter Ês/lot is the minimum Ês/lot of the pair of cells to which the requirement applies.
- NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

Note 4

- The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.
- This band is used only for E-UTRA carrier aggregation with other E-UTRA bands. NOTE 5:

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.2, clause 9.1.11.3, clause 9.1.4, and A.9.1.6.

9.1.6.2.4 Test description

±3

9.1.6.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AW GN no ise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.6.2.4.3.
- 4. Cell1 is PCell on the primary component carrier, Cell 2 is SCell on the secondary component carrier and Cell 3 is the neighbouring cell on the secondary component carrier. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.6.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCell according to Annex C.0, C.1 [and C.2] for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [11], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds (Refer TS 36.133 [4], clauses 8.3.3.2).
- 5. Set the parameters according to Table 9.1.6.2.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.

- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.
- 9. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.6.2.5-3. Also the reported RSRP value for Cell 3 is compared to the reported RSRP value for Cell 2 for each MeasurementReport message according to Table 9.1.6.2.5-3. This counts respectively as a Pass or Fail for the events "Cell 1-2" and "Cell 2-3".
- 10. SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.
- 11. Repeat steps 1-10 for switched PCell/SCell scenario.

Each of the events "Cell 1-2" and "Cell 2-3" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events ("Cell 1-2" and "Cell 2-3") pass for each configuration (without and with switched PCell/SCell scenario), the test passes. If one event fails, the test fails.

9.1.6.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.6.2.4.3-1: Common Exception messages for FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.4.2-1				
	Table H.4.2-2				
	Table H.4.2-4				

9.1.6.2.5 Test requirement

Table 9.1.6.2.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP FDD relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.6.2.5-3.

Table 9.1.6.2.5-1: Void

Table 9.1.6.2.5-2: RSRP FDD relative accuracy carrier aggregation test parameters

_	=			Test 1			
Pai	ameter	Unit	Cell 1	Cell 2	Cell3		
E-UTRARF Cha	annel Number		1	2	2		
BW _{channel}		MHz	10	10	10		
Timing offset to	cell1	μS	-	0	3μs or 92*Ts		
Time alignment 2 and cell 1	error between cell	·	-	≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-		
Measurement b		n_{PRB}		22—27			
	nce measurement		R.0 FDD	R.0 FDD	-		
channel defined					_		
PDSCH allocati		n_{PRB}	13—36	13—36	_		
measurement c A.3.1.2.1	H/PHICH Reference hannel defined in			R.6 FDD			
	defined in D.1.1 I D.1.2 (OP.2 FDD)		OP.1 FDD	OP.1 FDD	OP.2 FDD		
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RB PDSCH_RB OCNG_RANote1 OCNG_RBNote Bands 1, 4, 6, 10, 11, 18, 19, 21,23 and 24 Band 9		dB	-117 -116	0	0		
N _{oc} Note2 Band 28 Bands 2, 5, 7, 26 Note 6 and 27 Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 Note 7 Band 25		dBm/15 kHz	-115.5 -115 -114 -113.5	(N_{oc} for Cha	annel 1 +1dB)		
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	-4.00	0.09	-4.96		
s / *ot	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9		-121 -120				
N-1-0	Band 28		-119.5	(RSRP for	(RSRP for		
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 6 and 27 Bands 3, 8, 12, 13, 14, 17, 20, 22	dBm/15 kHz	-119 -118	Cell 1 +8dB)	Cell 1 +4.8dB)		
	and 29 ^{Note 7} Band 25		-117.5	_			
Io ^{Note3}	Bands 1, 4, 6, 10, 11, 18, 19, 21,23 and 24	dBm/9 MHz	-87.76	(lo for Channel 1 +5.51dB)			
	Band 9		-86.76				

	Bands 28		-86.26			
	Bands 2, 5, 7, 26 Note 6 and 27		-85.76			
	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7}		-84.76			
	Band 25		-84.26			
\hat{E}_s/N_{oc}		dB	-4	3	-1	
Propagat	ion condition	-		AWGN		
Note 1:	OCNG shall be used such	that both cells are	e fully allocate	d and a const	ant total	
	transmitted power spectral					
Note 2:	Interference from other cel	lls and noise sour	ces not specif	ied in the test i	s assumed to	
	be constant over subcarrie	ers and time and sl	hall be model	led as AWGN	of appropriate	
	power for $N_{\it oc}$ to be fulfilled	ed.				
Note 3:	RSRP and lo levels have by purposes. They are not se		•	eters for inform	ation	
Note 4:	RSRP minimum requirements noise at each receiver ante	requirements are specified assuming independent interference and				
Note 5:	 The selection of the bands for testing depends on the configuration of the carrier aggregations supported by the UEs. 					
Note 6:						
Note 7:	This band is used only for	E-UTR A carrier aç	ggregation wi	th other E-UTF	RAbands.	
Note 8:	The frequencies of PCell a	and SCell shall be	switched and	tes ted for each	:h	
	configuration.					

Table 9.1.6.2.5-3: RSRP FDD Carrier Aggregation relative accuracy requirements for the reported values

	Test 1
	All bands
Normal and Extreme Conditions	
Lowest reported value (Cell 2)	RSRP_x – 1
Highest reported value (Cell 2)	RSRP_x + 17
Lowest reported value (Cell 3)	RSRP_y-8
Highest reported value (Cell 3)	RSRP_y+1
RSRP_x is the reported value of Cell 1	
RSRP_y is the reported value of Cell 2	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.7 TDD RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.7.1 TDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.7.1.1 Test purpose

To verify that TDD absolute RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD absolute RSRP accuracy requirements of cells on the primary component carrier and the secondary component carrier.

9.1.7.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting CA.

9.1.7.1.3 Minimum conformance requirements

The TDD RSRP measurements of cells on the primary component carrier shall meet the absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1. The TDD RSRP measurements of cells on the secondary component carrier shall meet the absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1.

The accuracy requirements in table 9.1.7.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

 $RSRP|_{dBm}$ according to Annex I.3.1 for a corresponding Band.

Table 9.1.7.1.3-1: RSRP TDD absolute accuracy

Accı	ıracy		Conditions				
Normal	Extreme	Ês/lot	lo Note range				
condition	condition	LS/IOI	E-UTRA operating bands	Mini	mum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70	
			9, 42, 43	-120	N/A	-70	
			28	-119.5	N/A	-70	
±6	±9	≥-6 dB	2, 5, 7, 27, 41, 44	-119	N/A	-70	
-			26	-118.5 Note 2	N/A	-70	
			3, 8, 12, 13, 14, 17, 20, 22	-118	N/A	-70	
			29 Note 4	-118	N/A	-70	
			25	-117.5	N/A	-70	
±8	±11	≥-6 dB	Note 3	N/A	-70	-50	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.7.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.7.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2, clause 9.1.4, and A.9.1.7.

9.1.7.1.4 Test description

9.1.7.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.7.1.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.7.1.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCC is configured and activated. The absolute accuracy of RSRP is defined as the RSRP measured from the primary component carrier (Cell 1) and the RSRP measured from the secondary component carrier (Cell 2 and Cell 3).

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.1.7.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. The SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. The UE shall transmit periodically MeasurementReport messages.
- 9. The SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 1 and Cell 2 are compared to the actual RSRP values according to Table 9.1.7.1.5-2. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. The SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.
- 11. Repeat steps 1-10 for switched PCell/SCell scenario.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events ("Cell 1" and "Cell 2") pass for each configuration (without and with switched PCell/SCell scenario), the test passes. If one event fails, the test fails.

9.1.7.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.7.1.4.3-1: Common Exception messages for TDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents					
Common contents of system information					
blocks exceptions					
Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.4.2-1				
·	Table H.4.2-2				
	Table H.4.2-4				

9.1.7.1.5 Test requirement

Table 9.1.7.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD absolute accuracy test shall meet the reported values test requirements in table 9.1.7.1.5-2.

Table 9.1.7.1.5-1: RSRP TDD absolute accuracy carrier aggregation test parameters

P	Parameter			Test 1	
		Unit	Cell 1	Cell 2	Cell 3
E-UTRARF Chann	el Number	D. 41 . 1	1	10	<u> </u>
BW _{channel}	on figuration Note:	MHz		10	
Special subframe o				6	
Uplink/downlink cor	iliguration			ı	2o.or
Timing offset to Ce	II 1	μS	-	0	3μs or 92*Ts
Time alignment err	or between cell 2 and cell 1		-	≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-
Measurement band	lwidth	n_{PRB}		22—27	
PDSCH Reference defined in A.3.1.1.2	measurement channel		R.0 TDD	R.0 TDD	-
PDSCH allocation		n_{PRB}	13—36	13—36	-
PDCCH/PCFICH/P	HICH Reference nel defined in A.3.1.2.2	770		R.6 TDD	
OCNG Patterns de	fined in A.3.2.2.1 (OP.1		OP.1 TDD	OP.1 TDD	OP.2 TDD
TDD) and A.3.2.2.2 PBCH_RA	(OP.2 TDD)		01.11100	01.11100	01 .2 100
PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB OCNG_RB	Bands 33, 34, 35, 36,	dB	0	0	0
$N_{oc}^{$	37, 38, 39, 40 Bands 42, 43 Band 41, [44]	dBm/15 kHz	-117 -116 -115	(N_{oc} for Channel 1 +1dB)	
${ m \hat{E}}_{ m s}/{ m I}_{ m ot}$		dB	-4.00	0.46	-5.76
RSRP ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41, [44]	dBm/15 kHz	-121 -120 -119	(RSRP for Cell 1 +8dB)	(RSRP for Cell 1 +4dB)
lo ^{Note4} Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41, [44]		dBm/9 MHz	-87.76 -86.76	(lo for Cl +5.3	
10"00"			-85.76		
\hat{E}_s/N_{oc} Propagation condit	Band 41, [44]	dB	-85.76 -4	3	-1

For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.

OCNG shall be used such that both cells are fully allocated and a constant total transmitted Note 1:

Note 2:

power spectral density is achieved for all OFDM symbols.
Interference from other cells and noise sources not specified in the test is assumed to be Note 3: constant over subcarriers and time and shall be modelled as AWGN of appropriate power

for N_{oc} to be fulfilled.

Note 4:	RSRP and lo levels have been derived from other parameters for information purposes.
	They are not settable parameters themselves.
Note 5:	RSRP minimum requirements are specified assuming independent interference and noise
	at each receiver antenna port.
Note 6:	The selection of the bands for testing depends on the configuration of the carrier
	aggregations supported by the UEs.
Note 7:	The frequencies of PCell and SCell shall be switched and tested for each configuration.

Table 9.1.7.1.5-2: RSRP TDD Carrier Aggregation absolute accuracy requirements for the reported values

Parameter	Test 1					
Band of Cell 1 on Primary Component Carrier	Bands 33, 34, 35, 36, 37, 38, 39, 40	Bands42, 43	Band 41			
Nomal Conditions		I				
Lowest reported value (Cell 1)	RSRP_12	RSRP_13	RSRP_14			
Highest reported value (Cell 1)	RSRP_27	RSRP_28	RSRP_29			
Lowest reported value (Cell 2)	RSRP_20	RSRP_21	RSRP_22			
Highest reported value (Cell 2)	RSRP_35	RSRP_36	RSRP_37			
Extreme Conditions	•	•				
Lowest reported value (Cell 1)	RSRP_9	RSRP_19	RSRP_11			
Highest reported value (Cell 1)	RSRP_30	RSRP_31	RSRP_32			
Lowest reported value (Cell 2)	RSRP_17	RSRP_18	RSRP_19			
Highest reported value (Cell 2)	RSRP_38	RSRP_39	RSRP_40			
Note: The band of Cell 1 determines the levels for both Cell 1 and Cell 2, so the reported RSRP values depend only on the band of Cell 1, and are not dependent on the band of Cell 2.						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.7.2 TDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation

9.1.7.2.1 Test purpose

To verify that TDD relative RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD relative RSRP accuracy requirements of cells between the primary and secondary component carrier and TDD relative RSRP accuracy of cells on the secondary component carriers.

9.1.7.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting CA.

9.1.7.2.3 Minimum conformance requirements

The TDD RSRP relative measurements of cells on PCC and SCC shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.3.2. The TDD RSRP relative measurements of cells on the SCC shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.2.

The accuracy requirements in Table 9.1.7.2.3-1 for PCC-SCC relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

 $RSRP1, \! 2|_{dBm}$ according to Annex I.3.8 for a corresponding Band

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le 27 dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \text{ dB}$

Table 9.1.7.2.3-1: TDD RSRP relative accuracy for PCC and SCC

Accı	uracy	Conditions			
Normal	Extreme	Es/lot Note	lo ^{note l} range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±6	±6	≥-6 dB	2, 5, 7, 27, 41, 44	-119	-50
			26	-118.5 Note 3	-50
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50
			29 Note 4	-118	-50
			25	-117.5	-50

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.3, clause 9.1.4, and A.9.1.7.

The TDD RSRP relative measurements of cells on SCCs shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.2.

The accuracy requirements in Table 9.1.7.2.3-2 for SCCs relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

 $RSRP1,2|_{dBm}$ according to Annex I.3.8 for a corresponding Band.

Table 9.1.7.2.3-2: TDD RSRP relative accuracy for SCCs

Accı	uracy		Conditions		
Normal	Extreme	Ës/lot Note	lo ^{Note i} range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±2	±3	≥-3 dB	2, 5, 7, 27, 41, 44	-119	-50
			26	-118.5 Note 3	-50
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50
			29 Note 5	-118	-50
			25	-117.5	-50
±3	±3	≥-6 dB	Note 4	Note 4	Note 4

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.2, clause 9.1.11.3, clause 9.1.4, and A.9.1.7.

9.1.7.2.4 Test description

9.1.7.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS and AWGN noise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.7.2.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.7.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.1.7.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically MeasurementReport messages.
- 9. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.7.2.5-2. Also the reported RSRP value for Cell 3 is compared to the reported RSRP value for Cell 2 for each MeasurementReport message according to Table 9.1.7.2.5-2. This counts respectively as a Pass or Fail for the events "Cell 1-2" and "Cell 2-3".
- 10. SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.
- 11. Repeat steps 1-10 for switched PCell/SCell scenario.

Each of the events "Cell 1-2" and "Cell 2-3" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events ("Cell 1-2" and "Cell 2-3") pass for each configuration (without and with switched PCell/S Cell scenario), the test passes. If one event fails, the test fails.

9.1.7.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.7.2.4.3-1: Common Exception messages for TDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.4.2-1		
·	Table H.4.2-2		
	Table H.4.2-4		

9.1.7.2.5 Test requirement

Table 9.1.7.2.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.7.2.5-2.

Table 9.1.7.2.5-1: RSRP TDD relative accuracy carrier aggregation test parameters

E-UTRARF Channel N BW _{channel} Special subframe conf Uplink/downlink config	figuration Note: guration Vote: between cell 2 and cell 1	Unit MHz μs n _{PRB}		To alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	Cell 3
BW _{channel} Special subframe confi Uplink/downlink config Time alignment error b Timing offset to Cell 1 Measurement bandwic PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation	figuration Note: guration Vote: between cell 2 and cell 1	μs	-	10 6 1 ≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	- 3µs or
Time alignment error by Timing offset to Cell 1 Measurement bandwic PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation	puration Note 1 between cell 2 and cell 1	μs	-	6 1 ≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1. 0	
Time alignment error by Timing offset to Cell 1 Measurement bandwice PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation	puration Note 1 between cell 2 and cell 1	·	-	1 ≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	
Time alignment error by Timing offset to Cell 1 Measurement bandwice PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation	between cell 2 and cell 1	·	-	alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	
Timing offset to Cell 1 Measurement bandwic PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation	dth	·	-	alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	
Measurement bandwic PDSCH Reference me defined in A.3.1.1.2 PDSCH allocation		·	-		
PDSCH Reference medefined in A.3.1.1.2 PDSCH allocation		$n_{{\scriptscriptstyle PRB}}$			
defined in A.3.1.1.2 PDSCH allocation	eas urement channel			22—27	
			R.0 TDD	R.0 TDD	-
DDCCH/DCEICH/DUIC		n_{PRB}	13—36	13—36	-
measurement channel				R.6 TDD	
OCNG Patterns define TDD) and A.3.2.2.2 (O			OP.1 TDD	OP.1 TDD	OP.2 TDD
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB POCNG_RB	Bands 33, 34, 35, 36,	dB	0	0	0
N _{oc} Note3 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41, [44]		dBm/15 kHz	-117 -116 -115	(N_{oc} for (+10	
$\mathbf{\hat{E}}_{_{\mathrm{s}}}/\mathrm{I}_{_{\mathrm{ot}}}$		dB	-4.00	0.09	-4.96
RSRP ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41, [44]	dBm/15 kHz	-121 -120 -119	(RSRP for Cell 1 +8dB)	(RSRP for Cell 1 +4.8dB)
lo ^{Note4} Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41, [44]		dBm/9 MHz	-87.76 -86.76 -85.76	(lo for Cl +5.5	
\hat{E}_s/N_{oc}		dB	-4	3	-1
Propagation condition	subframe and uplink-dow	-		AWGN	

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power

for N_{oc} to be fulfilled.

Note 4:	RSRP and lo levels have been derived from other parameters for information purposes.
	They are not settable parameters themselves.
Note 5:	RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
Note 6:	The selection of the bands for testing depends on the configuration of the carrier
	aggregations supported by the UEs.
Note 7:	The frequencies of PCell and SCell shall be switched and tested for each configuration

Table 9.1.7.2.5-2: RSRP TDD Carrier Aggregation relative accuracy requirements for the reported values

	Test 1
	All bands
Normal and Extreme Conditions	-1
Lowest reported value (Cell 2)	RSRP_x-1
Highest reported value (Cell 2)	RSRP_x + 17
Lowest reported value (Cell 3)	RSRP_y-8
Highest reported value (Cell 3)	RSRP_y+1
RSRP_x is the reported value of Cell 1	-
RSRP_y is the reported value of Cell 2	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.8 FDD RSRP Accuracy E-UTRA under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.8.1 FDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.8.1.1 Test purpose

To verify that FDD absolute RSRP measurement accuracy measurements under time-domain measurement resource restriction with Non-MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions.

9.1.8.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward. Applicability requires support for FGI bit 115.

9.1.8.1.3 Minimum conformance requirements

The FDD RSRP measurements of cells shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.3.

The accuracy requirements in table 9.1.8.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

 $RSRP|_{dBm}$ according to Annex I.3.9 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.8.1.3-1: RSRP Intra frequency absolute accuracy under time domain measurement resource restriction

Accı	Accuracy		Conditions			
Normal	Extreme	Ês/lot	lo ^{Note 2} range			
condition	condition	25/100	E-UTRA operating bands	Miniı	mum Io	Maximum lo
dB	dB	dB		dBm/ 15kHz Note 1, 6	dBm/BW _{Channel}	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70
	_	≥-4 dB	9, 42, 43	-120	N/A	-70
			28	-119.5	N/A	-70
±6	±9		2, 5, 7, 27, 41, 44	-119	N/A	-70
			26	-118.5 Note 3	N/A	-70
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	N/A	-70
			25	-117.5	N/A	-70
±8	±11	≥-4 dB	Note 4	N/A	-70	-50

- NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.
- NOTE 2: Io is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.
- NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 4: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 6: The condition level is increased by $\triangle > 0$, when applicable, as described in TS 36.133 [4] sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.8.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.8.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.3, clause 9.1.4 and A.9.1.8

9.1.8.1.4 Test description

9.1.8.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.1.8.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.

- 4. Message contents are defined in clause 9.1.8.1.4.3.
- 5. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.1.8.1.4.1-1: General test parameters for E-UTRAN FDD RSRP intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6 !=0	Cell PCIs for Cell 1 and Cell 2 are selected randomly so that the condition is met
ABS pattern		'100000010000001000 00001000000010000000'	Non-MBSFN ABS. FDD ABS Pattern Info IE, as defined in TS 36.423 [28], clause 9.2.54. Configured in Cell 1. The first/leftmost bit corresponds to the subframe #0 of a radio frame satisfying SFN mod 40 = 0. No MBSFN subframes are configured in the ABS subframes in Cell 1.
Time-domain measurement resource restriction pattern for neighbour cell measurements on RF Channel 1		'10000000100000001000 0000100000001000000	Configured for Cell 2 measurements by meas Subframe Pattern-Neigh IE in meas Subframe Pattern Config-Neigh, as defined in TS 36.331 [5], clause 6.3.5. meas Subframe Cell List contains Cell 2.
Time-domain measurement resource restriction pattern for serving cell measurements		'010000001000000100 00000100000001000000'	Configured for measurements on Cell 1.

9.1.8.1.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The absolute accuracy of RSRP intra frequency measurements under time domain measurement resource restriction is tested by using the parameters in Tables 9.1.8.1.4.1-1 and Table 9.1.8.1.5-1 for non-MBSFN ABS with non-colliding CRS. Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 2 is the target cell to be measured for RSRP.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN FDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Tables 9.1.8.1.4.1-1 and Table 9.1.8.1.5-1. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 2 are compared to the actual RSRP values according to Table 9.1.8.1.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.8.1.5-1 as appropriate.

9.1.8.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.8.1.4.3-1: Common Exception messages for RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.3.5-1		
·	Table H.3.5-3		

Table 9.1.8.1.4.3-2: MeasResults: Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m e as R esultLis tEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.8.1.4.3-3: MeasResultListEUTRA: Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas ResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present		
}			
]}			

Table 9.1.8.1.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-16 RadioResourceConfigDedicated-SRB2-DRB(n,m)					
Information Element	Value/remark	Comment	Condition		
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=					
SEQUENCE {					
MeasSubframePatternPCell-r10 CHOICE {					
setup SEQUENCE {					
subframePatternFDD-r10	'010000001000000100	BIT STRING			
	00000100000001000000	(SIZE (40))			
}					
}					
}					

Table 9.1.8.1.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
measSubframePatternConfigNeigh-r10 CHOICE {			
setup SEQUENCE {			
measSubframePatternNeigh-r10 CHOICE {			
subframePatternFDD-r10	'1000000010000001000 00001000000010000000	BIT STRING (SIZE (40))	
}			
measSubframeCellList-r10 SEQUENCE {			
start	Physical Cell ID of Cell 2		
range	Not present		
}			
}			
}			

9.1.8.1.5 Test requirement

Table 9.1.8.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD absolute accuracy test shall meet the reported values test requirements in table 9.1.8.1.5-2.

Table 9.1.8.1.5-1: Cell Specific test parameters for E-UTRAN RSRP FDD absolute accuracy under time-domain measurement resource restriction with non-MBSFN ABS

D.	arameter	Unit	Tes	st 1	Tes	st 2	Tes	st 3
		Offic	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
	nannel Number	NALL-	4	-	,		1	
BW _{channel}	1 111	MHz	10		10		10	
Measurement		n_{PRB}	22—27		22—27			– 27
channel define	ence measurement d in A 1 1		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-
	PDSCH allocation		13—36	-	13—36	-	13—36	-
PDCCH/PCFIC	CH/PHICH Reference	n_{PRB}						
measurement of A.2.1	channel defined in		R.6	FDD	R.6	FDD	R.61	FDD
	s defined in D.1.5		OP.5	OP.6	OP.5	OP.6	OP.5	OP.6
PBCH_RA	d D.1.6 (OP.6 FDD)		FDD	FDD	FDD	FDD	FDD	FDD
PBCH_RB		-						
PSS_RA		1						
SSS_RA								
PCFICH_RB								
PHICH_RA								
PHICH_RB		dB	Note 6	0	Note 6	0	Note 6	0
PDCCH_RA								
PDCCH_RB		-						
PDSCH_RA PDSCH_RB		-						
OCNG_RA ^{NOTE 1}		-						
OCNG_RB ^{NOTE}		-						
OCNG_ND	Bands 1, 4, 6, 10,							
	11, 18, 19, 21, 23 and 24						-1	16
	Band 9	1	-106		-88		-115	
Note2	Band 28	dBm/15 kHz					-11	4.5
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26 Note 7 and 27	UDIII/15 KHZ					-114	
	Bands 3, 8, 12, 13,	-					112	
	14, 17, 20 and 22						-113	
^	Band 25						-112.5	
CRS \hat{E}_s/N_{oo}		dB	5	-2	5	-3.2	5	-3.2
CRS (\hat{E}_s/I_{ot})	Note 5	dB	2.88	-2.00	3. 30	-3.20	3.30	-3.20
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-111	-119.2
	Band 9]					-110	-118.2
RSRP Note3, 4,5	Band 28	dBm/15 kHz	-101	-108	-83	-91.2	-109.5	-117.7
	Bands 2, 5, 7, 26 Note 7 and 27					31.2	-109	-117.2
	Bands 3, 8, 12, 13, 14, 17, 20 and 22						-108	-116.2
	Band 25						-107.5	-115.7
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23						-81.55	-85.20
	and 24 Band 9	-					-80.55	-84.20
(IO) Note 3	Band 28	-ID (C 141.1	74.44	74.00	50.55	F7 00	-80.05	-83.70
$(Io)_{meas}^{Note 3}$	Bands 2, 5, 7, 26	dBm/9 MHz	-71.41	-74.88	-53. 55	-57. 20	-79.55	-83.20
	Note 7 and 27 Bands 3, 8, 12, 13,						-78.55	-82.20
	14, 17, 20 and 22							
Dropogation	Band 25		AW	CN	AW	CN	-78.05	-81.70
Propagation co	nullion		AVV	GIN	AVV	GIN	AW	UIV

Note 1:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols. Interference from other cells and noise sources not specified in the test is assumed to be constant over
11010 2.	·
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
	Applies to all subframes.
Note 3:	RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.
Note 4:	RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
Note 5:	Applies to restricted measurement subframes of the respective cell.
Note 6:	Non-ABS and ABS subframe channel powers defined in Table C.3.1.1.1-1.
Note 7:	For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel
	bandwidth within 865-894 MHz.

Table 9.1.8.1.5-2: E-UTRAN RSRP FDD absolute accuracy under time-domain measurement resource restriction with non-MBSFN ABS requirements for the reported values

Name at Oan ditians	Test 1	Test 2	T12	
Normal Conditions	All bands	All bands	Test 3	
			Bands 1, 4, 6, 10, 11, 18,	RSRP_14
			19, 21, 23 and 24	130131 _ 14
			Band 9	RSRP_15
Lowest reported value (Cell 2)	RSRP_25	RSRP_40	Band 28	RSRP_15
2011-0011-0011-0011-0011-0011-0011-0011	RORI _25	10101 _40	Bands 2, 5, 7, 26 and 27	RSRP_16
			Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_17
			Band 25	RSRP_17
			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_29
			Band 9	RSRP_30
Highest versented value (Cell 2)	DCDD 40	DODD TO	Band 28	RSRP_30
Highest reported value (Cell 2)	RSRP_40 RS	RSRP_59	Bands 2, 5, 7, 26 and 27	RSRP_31
			Bands 3, 8, 12, 13, 14, 17,	RSRP_32
			20 and 22	_
			Band 25	RSRP_32
	T4	T40		
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3	
Extreme Conditions			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_11
Extreme Conditions			Bands 1, 4, 6, 10, 11, 18,	RSRP_12
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_12 RSRP_12
Extreme Conditions Lowest reported value (Cell 2)			Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27	RSRP_12
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_12 RSRP_12
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17,	RSRP_12 RSRP_12 RSRP_13
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22	RSRP_12 RSRP_12 RSRP_13 RSRP_14
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18,	RSRP_12 RSRP_12 RSRP_13 RSRP_14 RSRP_14
Lowest reported value (Cell 2)	All bands RSRP_22	All bands RSRP_37	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24	RSRP_12 RSRP_12 RSRP_13 RSRP_14 RSRP_14 RSRP_32 RSRP_33 RSRP_33
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27	RSRP_12 RSRP_12 RSRP_13 RSRP_14 RSRP_14 RSRP_32 RSRP_33
Lowest reported value (Cell 2)	All bands RSRP_22	All bands RSRP_37	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28 Bands 2, 5, 7, 26 and 27 Bands 3, 8, 12, 13, 14, 17, 20 and 22 Band 25 Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24 Band 9 Band 28	RSRP_12 RSRP_12 RSRP_13 RSRP_14 RSRP_14 RSRP_32 RSRP_33 RSRP_33

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.8.2 FDD Relative RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.8.2.1 Test purpose

To verify that FDD relative RSRP measurement accuracy measurements under time-domain measurement resource restriction with Non-MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation condition.

9.1.8.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward. Applicability requires support for FGI bit 115.

9.1.8.2.3 Minimum conformance requirements

The FDD RSRP measurements of cells shall meet the intra frequency relative accuracy requirements defined in TS 36.133 [4] clause 9.1.2.4.

The accuracy requirements in table 9.1.8.2.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.10 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.8.2.3-1: RSRP Intra frequency relative accuracy under time domain measurement resource restriction

Accı	ıracy		Conditions		
Normal	Extreme	Es/lot Note	lo ^{note 3} ra	ange	
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/ 15kHz Note 1, 7	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
. 0	. 0	> 0 -ID	28	-119.5	-50
±2	±3	≥-2 dB	2, 5, 7, 27, 41, 44	-119	-50
			26	-118.5 Note 4	-50
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 6	-118	-50
			25	-117.5	-50
±3	±3	≥-4 dB	Note 5	Note 5	Note 5

NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: lo is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.

NOTE 4: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 5: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 6: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 7: The condition level is increased by Δ>0, when applicable, as described in TS 36.133 [4] sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.8.2.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.8.2.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.4, clause 9.1.4 and A.9.1.8

9.1.8.2.4 Test description

9.1.8.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.1.8.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.1.8.2.4.3.
- 5. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.1.8.2.4.1-1: General test parameters for E-UTRAN FDD RSRP intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6 !=0	Cell PCIs for Cell 1 and Cell 2 are selected randomly so that the condition is met
ABS pattern		'10000000100000001000 0000100000001000000	Non-MBSFN ABS. FDD ABS Pattern Info IE, as defined in TS 36.423 [28], clause 9.2.54. Configured in Cell 1. The first/leftmost bit corresponds to the subframe #0 of a radio frame satisfying SFN mod 40 = 0. No MBSFN subframes are configured in the ABS subframes in Cell 1.
Time-domain measurement resource restriction pattern for neighbour cell measurements on RF Channel 1		'10000000100000001000 0000100000001000000	Configured for Cell 2 measurements by meas Subframe Pattern-Neigh IE in meas Subframe Pattern Config-Neigh, as defined in TS 36.331 [5], clause 6.3.5. meas Subframe Cell List contains Cell 2.
Time-domain measurement resource restriction pattern for serving cell measurements		'010000001000000100 00000100000001000000'	Configured for measurements on Cell 1.

9.1.8.2.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The relative accuracy of RSRP intra frequency measurements under time domain measurement resource restriction is tested by using the parameters in Tables 9.1.8.2.4.1-1 and Table 9.1.8.2.5-1 for non-MBSFN ABS with non-colliding CRS. Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 1 and Cell 2 are both measured.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN FDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Tables 9.1.8.2.4.1-1 and Table 9.1.8.2.5-1. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.8.2.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.8.2.5-1 as appropriate.

9.1.8.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.8.2.4.3-1: Common Exception messages for RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-1			
	Table H.3.5-3			

Table 9.1.8.2.4.3-2: *MeasResults*: Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Information Element	Value/remark	Comment	Condition
VeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
meas ResultNeighCells CHOICE {			
meas ResultListEUTRA	Maga Dagulti is tELITDA		
meas resultiste of ra	MeasResultListEUTRA		
}			

Table 9.1.8.2.4.3-3: MeasResultListEUTRA: Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult	Not present		
}			
}			

Table 9.1.8.2.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-16 RadioResourceConfigDedicated-SRB2-DRB(n,m)						
Information Element	Value/remark	Comment	Condition			
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=						
SEQUENCE {						
MeasSubframePatternPCell-r10 CHOICE {						
setup SEQUENCE {						
subframePatternFDD-r10	'01000000010000000100	BIT STRING				
	00000100000001000000	(SIZE (40))				
}						
}						
}						

Table 9.1.8.2.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRP FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
measSubframePatternConfigNeigh-r10 CHOICE {			
setup SEQUENCE {			
measSubframePatternNeigh-r10 CHOICE {			
subframePatternFDD-r10	'1000000010000001000 00001000000010000000	BIT STRING (SIZE (40))	
}		(0.22 (10))	
measSubframeCellList-r10 SEQUENCE {			
start	Physical Cell ID of Cell 2		
range	Not present		
}			
}			
}			

9.1.8.2.5 Test requirement

Table 9.1.8.2.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP FDD relative accuracy test shall meet the reported values test requirements in table 9.1.8.2.5-2.

Table 9.1.8.2.5-1: Cell Specific test parameters for E-UTRAN RSRP FDD relative accuracy under timedomain measurement resource restriction with non-MBSFN ABS

		11.7	Tes	st 1	Tes	st 2	Tes	st 3
	arameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	nannel Number	B 41 1			,	-	1	
BW _{channel}		MHz	10		10		10	
Measurement		n_{PRB}	22—27		22—27			– 27
channel define	ence measurement		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-
PDSCH allocat			13—36	-	13—36		13—36	_
	CH/PHICH Reference	n_{PRB}	10 00		10 00		10 00	
	channel defined in		R.6	FDD	R.6	FDD	R.6 I	FDD
A.2.1								
	s defined in D.1.5		OP.5 FDD	OP.6 FDD	OP.5 FDD	OP.6 FDD	OP.5 FDD	OP.6 FDD
PBCH_RA	d D.1.6 (OP.6 FDD)		FDD	רטט	FDD	רטט	FDD	FDD
PBCH_RB		1						
PSS_RA								
SSS_RA		-						
PCFICH_RB PHICH_RA		-						
PHICH_RB		dB	Note 6	0	Note 6	0	Note 6	0
PDCCH_RA								
PDCCH_RB								
PDSCH_RA PDSCH_RB		-						
OCNG_RA ^{NOTE 1}		-						
OCNG_RB ^{NOTE}		-						
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24				'		-116	
	Band 9	-					-115	
$N_{oc}^{ m Note2}$	Band 28	dBm/15 kHz	-106		-88		-114.5	
IV _{oc}	Bands 2, 5, 7, 26 Note 7 and 27	UDIII/13 KI12	-'	00		00	-114	
	Bands 3, 8, 12, 13,						-113	
	14, 17, 20 and 22						-112.5	
<u>^</u>	Band 25		_		_			
CRS \hat{E}_s/N_{oo}		dB	5	-1.2	5	-3.2	5	-3.2
CRS (\hat{E}_s/I_{ot})	Note 5 meas	dB	2.55	-1.20	3.30	-3.20	3.30	-3.20
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-111	-119.2
	Band 9]					-110	-118.2
RSRP Note3, 4,5	Band 28 Bands 2, 5, 7, 26	dBm/15 kHz	-101	-107.2	-83	-91.2	-109.5	-117.7
	Note 7 and 27					0	-109	-117.2
	Bands 3, 8, 12, 13, 14, 17, 20 and 22						-108	-116.2
	Band 25						-107.5	-115.7
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-81.55	-85.20
	Band 9	1					-80.55	-84.20
$(Io)_{meas}^{Note 3}$	Band 28	dBm/9 MHz	-71.30	-74.63	-53.55	-57.20	-80.05	-83.70
() meas	Bands 2, 5, 7, 26 Note 7 and 27					0.120	-79.55	-83.20
	Bands 3, 8, 12, 13, 14, 17, 20 and 22						-78.55	-82.20
Dron	Band 25		A1 A 7	CNI	A\ A /	CNI	-78.05	-81.70
Propagation co	nation		AVV	GN	AVV	GN	AW	GIN

Note 1:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
Note 2:	Interference from other cells and noise sources not specified in the test is assumed to be constant over
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
	Applies to all subframes.
Note 3:	RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. lo levels are calculated in CRS symbols of measurement restricted subframes.
Note 4:	RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
Note 5:	Applies to restricted measurement subframes of the respective cell.
Note 6:	Non-ABS and ABS subframe channel powers defined in Table C.3.1.1.1-1.
Note 7:	For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz.

Table 9.1.8.2.5-2: E-UTRAN RSRP FDD relative accuracy under time-domain measurement resource restriction with non-MBSFN ABS requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2 All bands	Test 3 All bands		
Lowest reported value (Cell 2)	RSRP_x-10	RSRP_x-13	RSRP_x-13		
Highest reported value (Cell 2)	RSRP_x-3	RSRP_x-4	RSRP_x-4		
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3 All bands		
Lowest reported value (Cell 2)	RSRP_x-11	RSRP_x-13	RSRP_x-13		
Highest reported value (Cell 2)	RSRP_x-2	RSRP_x-4	RSRP_x-4		
RSRP_x is the reported value of Cell 1					

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.9 TDD RSRP Accuracy E-UTRA under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.9.1 TDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.9.1.1 Test purpose

To verify that TDD absolute RSRP measurement accuracy measurements under time -domain measurement resource restriction with Non-MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions.

9.1.9.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward. Applicability requires support for FGI bit 115.

9.1.9.1.3 Minimum conformance requirements

The TDD RSRP measurements of cells shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.3.

The accuracy requirements in table 9.1.9.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.9 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.9.1.3-1: RSRP Intra frequency absolute accuracy under time domain measurement resource restriction

Accı	ıracy		Conditions					
Normal	Extreme	Ês/lot	lo Note 2 range					
condition	condition	LS/IOC	E-UTRA operating bands	Mini	mum lo	Maximum lo		
dB	dB	dB		dBm/ 15kHz ^{Note}	dBm/BW _{Channel}	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70		
	±9 ≥		9, 42, 43	-120	N/A	-70		
		> 4 -ID	28	-119.5	N/A	-70		
±6		±9 ≥-4 dB	2, 5, 7, 27, 41, 44	-119	N/A	-70		
				26	-118.5 Note 3	N/A	-70	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	N/A	-70		
			25	-117.5	N/A	-70		
±8	±11	≥-4 dB	Note 4	N/A	-70	-50		

- NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.
- NOTE 2: Io is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.
- NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 4: The same bands apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 6: The condition level is increased by ∆>0, when applicable, as described in TS 36.133 [4] sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.9.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.9.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.3, clause 9.1.4 and A.9.1.9

9.1.9.1.4 Test description

9.1.9.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.1.9.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.1.9.1.4.3.
- 5. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.1.9.1.4.1-1: General test parameters for E-UTRAN TDD RSRP intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	Also the aggressor cell.
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe
			configurations see Table 4.2-1 in [16].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [16].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are randomly
		!=0	selected so that the condition is met
ABS pattern		'000000001000000001'	Non-MBSFN ABS. TDD ABS Pattern Info IE, as
			defined in TS 36.423 [28], clause 9.2.54.
			Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 20 = 0. No MBSFN subframes are
			configured in the ABS subframes in Cell 1.
Time-domain measurement		'0000000001000000001'	Configured for Cell 2 measurements by
resource restriction pattern for			measSubframePattern-Neigh IE in
neighbour cell measurements on			measSubframePatternConfig-Neigh, as defined
RF Channel 1			in TS 36.331 [2], clause 6.3.5.
			meas Subframe CellList contains Cell 2.
Time-domain measurement		'100000000100000000'	Configured for Cell 1 measurements.
resource restriction pattern for			
serving cell measurements			

9.1.9.1.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The absolute accuracy of RSRP intra frequency measurements under time domain measurement resource restriction is tested by using the parameters in Tables 9.1.9.1.4.1-1 and Table 9.1.9.1.5-1 for non-MBSFN ABS with non-colliding CRS. Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 2 is the target cell to be measured for RSRP.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN TDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Tables 9.1.9.1.4.1-1 and Table 9.1.9.1.5-1. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.

- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 2 are compared to the actual RSRP values according to Table 9.1.9.1.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.9.1.5-1 as appropriate.

9.1.9.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.9.1.4.3-1: Common Exception message for RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-1			
·	Table H.3.5-3			

Table 9.1.9.1.4.3-2: MeasResults: Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1		
measResultServCell SEQUENCE {			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
m e as R e sultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.9.1.4.3-3: MeasResultListEUTRA: Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultsLlstEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId of Cell 2	INTEGER (0503)	
measResult SEQUENCE {			
rsrpResult			
rsrqResult	Not present		
}			
}			

Table 9.1.9.1.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-16 RadioResourceConfigDedicated-SRB2-DRB(n,m)							
Information Element	Value/remark	Comment	Condition				
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=							
SEQUENCE {							
MeasSubframePatternPCell-r10 CHOICE {							
setup SEQUENCE {							
subframePatternTDD-r10 CHOICE {							
subframeConfig1-5-r10	'100000000100000000'	BIT STRING					
		(SIZE (20))					
}							
}							
}							
}							

Table 9.1.9.1.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-2 MeasObjectEUTRA-GENERIC							
Information Element	Value/remark	Comment	Condition				
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE							
{							
measSubframePatternConfigNeigh-r10 CHOICE {							
setup SEQUENCE {							
measSubframePatternNeigh-r10 CHOICE {							
subframePatternTDD-r10 CHOICE {							
subframeConfig1-5-r10	'000000001000000001'	BIT STRING					
		(SIZE (20))					
}							
}							
measSubframeCellList-r10 SEQUENCE {							
start	Physical Cell ID of Cell 2						
range	Not present						
}							
}							
}							
}							

9.1.9.1.5 Test requirement

Table 9.1.9.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD absolute accuracy test shall meet the reported values test requirements in table 9.1.9.1.5-2.

Table 9.1.9.1.5-1: Cell Specific test parameters for E-UTRAN RSRP TDD absolute accuracy under time-domain measurement resource restriction with non-MBSFN ABS

Parameter		Unit	Tes	st 1	Tes	st 2	Tes	st 3		
		Offic	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2		
E-UTRARF Channel Number			,	-	•		1			
BW _{channel}		MHz	10		10		10			
Measurement		n_{PRB}		–27	22—27		22—27			
	ence measurement		R.0	-	R.0	-	R.0	_		
channel define	d in A.1.2		TDD		TDD		TDD			
PDSCH alloca		n_{PRB}	13—36	-	13—36	-	13—36	-		
PDCCH/PCFIC	CH/PHICH Reference									
	channel defined in		R.6	TDD	R.6	TDD	R.6	TDD		
A.2.2										
	s defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2		
	d D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD		
PBCH_RA										
PBCH_RB										
PSS_RA										
SSS_RA										
PCFICH_RB										
PHICH_RA										
PHICH_RB		dB	Note 6	0	Note 6	0	Note 6	0		
PDCCH_RA										
PDCCH_RB										
PDSCH_RA										
PDSCH_RB										
OCNG_RANOTE										
OCNG_RB ^{NOTE}										
	Bands 33, 34, 35,						-1	16		
$N_{oc}^{ m Note2}$	36, 37, 38, 39, 40	dBm/15 kHz	-106		-106		-88			
- voc	Bands 42, 43								-115 -114	
	Band 41, 44						-1	14		
CRS \hat{E}_s/N_{od}		dB	5	-2	5	-3.2	5	-3.2		
CRS (\hat{E}_s/I_{ot})	Note 5	dB	2.88	-2.00	3.30	-3.20	3.30	-3.20		
	Bands 33, 34, 35,						-111	-119.2		
RSRP Note3, 4,5	36, 37, 38, 39, 40	dBm/15 kHz	-101	-108	-83	-91.2				
KOKF	Bands 42, 43	ubili/15 kmz	-101	-100	-03	-91.2	-110	-118.2		
	Band 41, 44						-109	-117.2		
	Bands 33, 34, 35,						-81.55	-85.20		
$(Io)_{meas}^{Note 3}$	36, 37, 38, 39, 40	dBm/9 MHz	-71.41	-74.88	-53.55	-57.20				
meas	Bands 42, 43				23.00		-80.55	-84.20		
	Band 41, 44		***	011	***	011	-79.55	-83.20		
Propagation co	ondition			GN		GN	AW	_		

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.
- Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.
- Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: Applies to restricted measurement subframes of the respective cell.
- Note 6: Non-ABS and ABS subframe channel powers defined in Table C.3.1.1.1-1.

Table 9.1.9.1.5-2: E-UTRAN RSRP TDD absolute accuracy under time-domain measurement resource restriction with non-MBSFN ABS requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2 All bands	Test 3	
Lowest reported value (Cell 2)	RSRP_25	RSRP_40	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_14
Lowest reported value (Cell 2)	NONF_20	NONF_40	Bands 42, 43 Band 41, 44	RSRP_15 RSRP_16
Highest reported value (Call 2)	DCDD 40	DODD 50	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_29
Highest reported value (Cell 2)	RSRP_40	RSRP_59	Bands 42, 43 Band 41, 44	RSRP_30 RSRP_31
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3	
Lowest reported value (Call 2)	RSRP 22	RSRP_37	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_11
Lowest reported value (Cell 2)	KSKF_22	KSKP_3/	Bands 42, 43 Band 41, 44	RSRP_12 RSRP_13
Highest reported value (Call 2)	DCDD 42	DSDD 63	Bands 33, 34, 35, 36, 37, 38, 39, 40	RSRP_32
Highest reported value (Cell 2)	RSRP_43	RSRP_62	Bands 42, 43 Band 41, 44	RSRP_33 RSRP_34

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.9.2 TDD Relative RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)

9.1.9.2.1 Test purpose

To verify that TDD relative RSRP measurement accuracy measurements under time-domain measurement resource restriction with Non-MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation condition.

9.1.9.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward. Applicability requires support for FGI bit 115.

9.1.9.2.3 Minimum conformance requirements

The TDD RSRP measurements of cells shall meet the intra frequency relative accuracy requirements defined in TS 36.133 [4] clause 9.1.2.4.

The accuracy requirements in table 9.1.9.2.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.10 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.9.2.3-1: RSRP Intra frequency relative accuracy under time domain measurement resource restriction

Accuracy		Conditions			
Normal	Extreme	Ës/lot Note	lo notes range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/ 15kHz ^{Note 1, 7}	dBm/BW _{Channel}
		≥-2 dB	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±2	±3		2, 5, 7, 27, 41, 44	-119	-50
			26	-118.5 Note 4	-50
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 6	-118	-50
			25	-117.5	-50
±3	±3	≥-4 dB	Note 5	Note 5	Note 5

- NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.
- NOTE 2: The parameter £s/lot is the minimum £s/lot of the pair of cells to which the requirement applies.
- NOTE 3: lo is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.
- NOTE 4: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 5: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 6: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 7: The condition level is increased by Δ>0, when applicable, as described in TS 36.133 [4] sections B.4.2 and B.4.3.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.9.2.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.9.2.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.4, clause 9.1.4 and A.9.1.9

9.1.9.2.4 Test description

9.1.9.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.1.9.2.4.1-1.

- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.1.9.2.4.3.
- 5. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.1.9.2.4.1-1: General test parameters for E-UTRAN TDD RSRP intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	Also the aggressor cell.
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe
			configurations see Table 4.2-1 in [16].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [16].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are randomly
		!=0	selected so that the condition is met
ABS pattern		'000000001000000001'	Non-MBSFN ABS. TDD ABS Pattern Info IE, as
			defined in TS 36.423 [28], clause 9.2.54.
			Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 20 = 0. No MBSFN subframes are
			configured in the ABS subframes in Cell 1.
Time-domain measurement		'0000000001000000001'	Configured for Cell 2 measurements by
resource restriction pattern for			meas Subframe Pattern-Neigh IE in
neighbour cell measurements on			meas Subframe Pattern Config-Neigh, as defined
RF Channel 1			in TS 36.331 [2], clause 6.3.5.
			meas Subframe CellList contains Cell 2.
Time-domain measurement		'100000000100000000'	Configured for Cell 1 measurements.
resource restriction pattern for			
serving cell measurements			

9.1.9.2.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The relative accuracy of RSRP intra frequency measurements under time domain measurement resource restriction is tested by using the parameters in Tables 9.1.9.2.4.1-1 and Table 9.1.9.2.5-1 for non-MBSFN ABS with non-colliding CRS. Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 1 and Cell 2 are both measured.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN TDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Tables 9.1.9.2.4.1-1 and Table 9.1.9.2.5-1. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.

- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.9.2.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.1.9.2.5-1 as appropriate.

9.1.9.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.9.2.4.3-1: Common Exception message for RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
	Table H.3.5-1		
·	Table H.3.5-3		

Table 9.1.9.2.4.3-2: *MeasResults*: Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1		
measResultServCell SEQUENCE {			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
m e as ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.1.9.2.4.3-3: MeasResultListEUTRA: Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5				
Information Element	Value/remark	Comment	Condition	
MeasResultsLlstEUTRA ::= SEQUENCE (SIZE				
(1maxCellReport)) OF SEQUENCE {				
physCellId	PhysCellId of Cell 2	INTEGER (0503)		
measResult SEQUENCE {				
rsrpResult				
rsrqResult	Not present			
}				
}				

Table 9.1.9.2.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-16 RadioResourceConfigDedicated-SRB2-DRB(n,m)				
Information Element	Value/remark	Comment	Condition	
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=				
SEQUENCE {				
MeasSubframePatternPCell-r10 CHOICE {				
setup SEQUENCE {				
subframePatternTDD-r10 CHOICE {				
subframeConfig1-5-r10	'100000000100000000'	BIT STRING		
		(SIZE (20))		
}				
}				
}				
}				

Table 9.1.9.2.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRP TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS relative accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6	6-2 MeasObjectEUTRA-GENE	RIC	
Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
measSubframePatternConfigNeigh-r10 CHOICE {			
setup SEQUENCE {			
measSubframePatternNeigh-r10 CHOICE {			
subframePatternTDD-r10 CHOICE {			
subframeConfig1-5-r10	'000000001000000001'	BIT STRING	
		(SIZE (20))	
}			
}			
measSubframeCellList-r10 SEQUENCE {			
start	Physical Cell ID of Cell 2		
range	Not present		
}			
}			
}			
}			

9.1.9.2.5 Test requirement

Table 9.1.9.2.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD relative accuracy test shall meet the reported values test requirements in table 9.1.9.2.5-2.

Table 9.1.9.2.5-1: Cell Specific test parameters for E-UTRAN RSRP TDD relative accuracy under timedomain measurement resource restriction with non-MBSFN ABS

D	Parameter		Tes	st 1	Tes	st 2	Test 3	
		Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Channel Number		MHz		1	,		1	
BW _{channel}	BW _{channel}		1	0	10		10	
Measurement		n_{PRB}		–27	22—27		22—27	
	ence measurement		R.0	_	R.0	_	R.0	_
channel define	d in A.1.2		TDD		TDD		TDD	
PDSCH alloca	tion	n_{PRB}	13—36	-	13—36	-	13—36	-
PDCCH/PCFIC	CH/PHICH Reference							
	channel defined in		R.6	TDD	R.6	TDD	R.6	TDD
A.2.2								
	s defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2
	d D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD
PBCH_RA								
PBCH_RB								
PSS_RA								
SSS_RA								
PCFICH_RB								
	PHICH_RA							
	PHICH_RB		Note 6	0	Note 6	0	Note 6	0
PDCCH_RA								
	PDCCH_RB							
PDSCH_RA								
PDSCH_RB								
OCNG_RANOTE								
OCNG_RB ^{NOTE}	·							
	Bands 33, 34, 35,						-116	
$N_{oc}^{ m Note2}$	36, 37, 38, 39, 40	dBm/15 kHz	-106		-8	38	-115	
oc	Bands 42, 43							
	Band 41, 44			ı			-1	14
CRS \hat{E}_s/N_{od}		dB	5	-1.2	5	-3.2	5	-3.2
CRS (\hat{E}_s/I_{ot})	Note 5	dB	2.55	-1.2	3.30	-3.20	3.30	-3.20
	Bands 33, 34, 35,						-111	-119.2
RSRP Note3,4,5	36, 37, 38, 39, 40	dBm/15 kHz	-101	-107.2	-83	-91.2		
KOKI	Bands 42, 43	UDIII/15 KHZ	-101	-107.2	-83	-91.2	-110	-118.2
Band 41, 44							-109	-117.2
	Bands 33, 34, 35,						-81.55	-85.20
$(Io)_{meas}^{Note 3}$	36, 37, 38, 39, 40 Bands 42, 43	dBm/9 MHz	-71.30	-74.63	-53.55	-57.20	-80.55	-84.20
	Band 41, 44						-79.55	-83.20
Propagation co			۸۱۸۸	GN	۸۱۸۸	GN	-79.55 AW	
	ONUMENT					GIN	AVV	_

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.
- Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.
- Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: Applies to restricted measurement subframes of the respective cell.
- Note 6: Non-ABS and ABS subframe channel powers defined in Table C.3.1.1.1-1.

Table 9.1.9.2.5-2: E-UTRAN RSRP TDD relative accuracy under time-domain measurement resource restriction with non-MBSFN ABS requirements for the reported values

Normal Conditions	Test 1 All bands	Test 2 All bands	Test 3 All bands					
Lowest reported value (Cell 2)	RSRP_x-10	RSRP_x-13	RSRP_x-13					
Highest reported value (Cell 2)	RSRP_x-3	RSRP_x-4	RSRP_x-4					
Extreme Conditions	Test 1 All bands	Test 2 All bands	Test 3 All bands					
Lowest reported value (Cell 2)	RSRP_x-11	RSRP_x-13	RSRP_x-13					
Highest reported value (Cell 2)	RSRP_x-2	RSRP_x-4	RSRP_x-4					
RSRP_x is the reported value of Cell 1								

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.10 FDD RSRP Accuracy E-UTRA under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

9.1.10.1 FDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- Connection diagram for this test is undefined.
- Message Contents for this test are undefined.
- The Test Tolerances applicable to this test are undefined.
- Cell specific parameters table is incomplete

9.1.10.1.1 Test purpose

To verify that FDD absolute RSRP measurement accuracy measurements under time-domain measurement resource restriction with MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions. This test will verify the FDD absolute RSRP accuracy.

9.1.10.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward supporting eICIC. Applicability requires support for FGI bit 115.

9.1.10.1.3 Minimum conformance requirements

The FDD RSRP measurements of cells shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.3.

The accuracy requirements in table 9.1.10.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

 $RSRP|_{dBm}$ according to Annex I.3.1 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.10.1.3-1: RSRP Intra frequency absolute accuracy under time domain measurement resource restriction

Parameter	Unit	Accura	cy [dB]				Conditions 1,2			
		Normal	Extrem	Bands 1, 4, 6,	Bands 2, 5, 7,	Band 25	Band 26	Band 28	Bands 3, 8,	Bands 9
		conditi	е	10, 11, 18, 19,	27, 41, [44]				12, 13, 14, 17,	
		on	conditi	21, 24, 33, 34,					20, 22	
			on	35, 36, 37, 38,						
				39, 40, 42, 43						
				lo	lo	lo	lo	lo	lo	lo
RSRP for	dBm	±6	±9	-	-	-	-	-	-	-
Ês/lot ≥ -4				121dBm/15kH	119dBm/15kH	117.5dBm/15k	118.5dBm/15k	119.5dBm/15k	118dBm/15kH	120dBm/15kH
dB				z70dBm/	z70dBm/	Hz70dBm/	Hz70dBm/	Hz70dBm/	z70dBm/	z70dBm/
				BW _{Channel}	BW _{Channel}	BW _{Chan nel}	BW _{Channel} ³	BW Channel	BW _{Channel}	BW Channel
RSRP for	dBm	±8	±11	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/
Ês/lot ≥ -4				BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}
dB				50dBm/	50dBm/	50dBm/	50dBm/	50dBm/	50dBm/	50dBm/
				BW _{Channel}	BW _{Chan nel}	BW _{Channel}	BW _{Channel}	BW Channel	BW _{Channel}	BW Channel

lo is assumed to have constant EPRE across the bandwidth.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.10.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.10.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133[4] clause 9.1.2.3, clause 9.1.4 and A.9.1.10

9.1.10.1.4 Test description

9.1.10.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: FFS.

Channel Bandwidth to be tested: FFS.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure FFS.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.10.1.4.3.
- 4. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

lo is defined over REs in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell.

The condition is -119dBm/15kHz...-70dBm/BW_{Channel} when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz

9.1.10.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.1.10.1.5-1 and 9.1.10.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 1 and Cell 2 are compared to the actual RSRP values according to Table 9.1.10.1.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.1.10.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause FFS with the following exceptions:

FFS

9.1.10.1.5 Test requirement

Table 9.1.10.1.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP FDD absolute accuracy test shall meet the reported values test requirements in table 9.1.10.1.5-3.

Table 9.1.10.1.5-1: General test parameters for E-UTRAN RSRP FDD absolute accuracy under timedomain measurement resource restriction with MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
E-UTRARF Channel Number		1	One FDD carrier frequency is used
Channel Bandwidth (BW _{channel})	MHz	10	For both cells in the test
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6 =0, PCI _{cell1} not equal to PCI _{cell2}	Cell PCIs for Cell 1 and Cell 2 are selected randomly so that the condition is met
ABS pattern		'010000010000001000 00000010000001000000'	MBSFN ABS pattern. FDD ABS Pattern Info IE, as defined in TS 36.423, clause 9.2.54. Configured in Cell 1. The first/leftmost bit corresponds to the subframe #0 of a radio frame satisfying SFN mod 40 = 0. All ABS subframes are MBSFN subframes.
Time-domain measurement resource restriction pattern for neighbour cell measurements on RF Channel 1		'010000010000001000 00000010000001000000'	Configured for Cell 2 measurements by meas SubframePatternNeigh IE in meas SubframePatternConfigNeigh, as defined in TS 36.331, clause 6.3.5. meas SubframeCellList contains Cell 2.
Time-domain measurement resource restriction pattern for serving cell measurements		'000100000010000001 000000100000010000'	Configured for measurements on Cell 1.

Table 9.1.10.1.5-2: Cell Specific test parameters for E-UTRAN RSRP FDD absolute accuracy under time-domain measurement resource restriction with MBSFN ABS

			To	st 1	Tor	st 2	Tes	+ 2
Pai	rameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1 Cell 2	
Measurement ba	andwidth	70		–27		–27	22-	
	nce measurement	n_{PRB}	R.0	<i></i>	R.0		R.0	
channel defined			FDD	-	FDD	-	FDD	-
PDSCH allocation		n	13—36	-	13—36	-	13—36	-
	H/PHICH Reference	n_{PRB}						
	hannel defined in		R.6	FDD	R.6	FDD	R.6 I	-DD
A.2.1			0.0	05.0	05.0	05.0	0.5	0.0
FFS	defined in FFS and		OP.8 FDD	OP.6 FDD	OP.8 FDD	OP.6 FDD	OP.8 FDD	OP.6 FDD
PBCH_RA			100	100	100	100	100	100
PBCH_RB								
PSS_RA								
SSS_RA PCFICH_RB								
PHICH_RA								
PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA								
PDCCH_RB								
PDSCH_RA PDSCH_RB								
OCNG_RA ^{NOTE}								
OCNG_RB Note1								
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-116	
$N_{oc}^{ m Note~2}$	Bands 2, 5, 7, 26 Note 7 and 27	dBm/15 kHz	-106	-106	-88	-88	-1	
	Band 25 Bands 3, 8, 12,						-11	2.5
	13, 14, 17, 20 and 22						-113 -115	
	Band 9						-1	15
CRS \hat{E}_s/N_{oc}		dB	[5]	[-2]	[5]	[-4]	[5]	[-4]
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						[-111]	[-120]
	Bands 2, 5, 7, 26 Note 7 and 27						[-109]	[-118]
RSRP Note 3,4	Band 25	dBm/15 kHz	[-101]	[-108]	[-83]	[-92]	[-107.5]	[-116.5]
	Bands 3, 8, 12, 13, 14, 17, 20 and						[-108]	[-117]
	22 Band 9						[-110]	[-119]
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						[-81.63]	[-85.37]
$(Io)_{meas}$ Note 3	Bands 2, 5, 7, 26 Note 7 and 27						[-79.63]	[-83.37]
in the 1 st OFDM	Band 25	dBm/9 MHz	[-71.41]	[-74.88]	[-53.63]	[-57.37]	[-78.13]	[-81.87]
symbol	ymbol Bands 3, 8, 12, 13, 14, 17, 20 and						[-78.63]	[-82.37]
22 Band 9							[-80.63]	[-84.37]
Dando 1 4 6 10								
in OFDM	11, 18, 19, 21, 23 an OFDM and 24		[-71.41]	[-76.09]	[-53.63]	[-58.76]	[-81.63]	[-86.76]
symbols other than the 1 st	Bands 2, 5, 7, 26 Note 7 and 27						[-79.63]	[-84.76]

one	Band 25					[-78.13]	[-83.26]
	Bands 3, 8, 12, 13, 14, 17, 20 and 22					[-78.63]	[-83.76]
	Band 9					[-80.63]	[-85.76]
Propagation co	ndition	AW	GN	AW	GN	AW	GN

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}$ to be fulfilled. Applies to all subframes.
- Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.
- Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: Applies to restricted measurement subframes of the respective cell.
- Note 6: Non-ABS and ABS subframe channel powers defined in Table A.3.4.2.1-1.
- Note 7: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz.

Table 9.1.10.1.5-3: RSRP FDD Carrier Aggregation absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3						
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24	Bands 2, 5, 7, 26, 27	Band 25	Bands 3, 8, 12, 13, 14, 17, 20, 22	Band 9		
Nomal Conditions									
Lawrent reported value (Call 2)	RSRP_48	RSRP_35	RSRP_14	RSRP_16	RSRP_17	RSRP_17	RSRP_15		
Lowest reported value (Cell 2)	+TT	+TT	+TT	+TT	+TT	+TT	+TT		
Highest reported value (Cell 2)	RSRP_60	RSRP_47	RSRP_26	RSRP_28	RSRP_29	RSRP_29	RSRP_27		
Trigriest reported value (Cell 2)	+TT	+TT	+TT	+TT	+TT	+TT	+TT		
Extreme Conditions									
Lowest reported value (Cell 2)	RSRP_46	RSRP_33	RSRP_12	RSRP_14	RSRP_15	RSRP_15	RSRP_13		
Lowest reported value (Cell 2)	+TT	+TT	+TT	+TT	+TT	+TT	+TT		
Highest reported value (Cell 2)	RSRP_62 +TT	RSRP_49 +TT	RSRP_28 +TT	RSRP_30 +TT	RSRP_31 +TT	RSRP_31 +TT	RSRP_29 +TT		

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.10.2 FDD Relative RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- Connection diagram for this test is undefined.
- Message Contents for this test are undefined
- The Test Tolerances applicable to this test are undefined
- Cell specific parameters table is incomplete

9.1.10.2.1 Test purpose

To verify that FDD relative RSRP measurement accuracy under time-domain measurement resource restriction with MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions. This test will verify the FDD relative RSRP accuracy requirements.

9.1.10.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward supporting eICIC. Applicability requires support for FGI bit 115.

9.1.10.2.3 Minimum conformance requirements

The FDD RSRP relative measurements of cells shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.4.

The accuracy requirements in Table 9.1.10.2.3-1 for relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.1 for a corresponding Band

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.10.2.3-1: RSRP Intra frequency relative accuracy under time domain measurement resource restriction

Paramet	Unit	Accura	icy [dB]		Conditions (1996)						
er		Normal	Extreme	Bands 1, 4, 6,	Bands 2, 5,	Band 25	Band 26	Band 28	Bands 3, 8,	Band 9, 42,	
		conditio	conditio	10, 11, 18, 19,	7, 27, 41,				12, 13, 14,	43	
		n	n	21, 24, 33, 34,	[44]				17, 20, 22		
				35, 36, 37, 38,							
				39, 40							
				lo	lo		lo	lo	lo	lo	
RSRP for	dBm	±2	±3	-	-	-	-	-	-	-	
Ês/lot ≥ -				121dBm/15kHz	119dBm/15k	117.5dBm/15	118.5dBm/15	119.5dBm/15	118dBm/15kH	120dBm/15kH	
2 dB				50dBm/	Hz	kHz	kHz	kHz	z50dBm/	z50dBm/	
				BW _{Chan nel}	50dBm/	50dBm/	50dBm/	50dBm/	BW _{Channel}	BW _{Channel}	
					BW _{Channel}	BW Channel	BW _{Channel} ⁴	BW Channel			
RSRP for	dBm	±3	±3	-	-	-	-	-119.5dBm/	-	-	
Ês/lot ≥ -				121dBm/15kHz	119dBm/15k	117.5dBm/15	118.5dBm/15	BW _{Channel}	118dBm/15kH	120dBm/15kH	
4 dB				50dBm/	Hz	kHz	kHz	50dBm/	z50dBm/	z50dBm/	
				BW _{Channel}	50dBm/	50dBm/	50dBm/	BW Channel	BW _{Channel}	BW _{Channel}	
					BW _{Channel}	BW _{Channel}	BW _{Channel} ⁴				

Note 1: Io is assumed to have constant EPRE across the bandwidth.

Note 2: The parameter Ês/lot is the minimum Ês/lot of the pair of cells to which the requirement applies.

Note 3: lo is defined over REs in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell.

Note 4: The condition is -119dBm/15kHz...-50dBm/BW_{Channel} when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.4, clause 9.1.4 and A.9.1.10.

9.1.10.2.4 Test description

9.1.10.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: FFS.

Channel Bandwidth to be tested: FFS.

- 1. Connect the SS (node B emulator) and AW GN no ise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure FFS.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.10.2.4.3.
- 4. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.10.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.1.10.2.5-1 and 9.1.10.2.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.10.2.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.1.10.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause FFS with the following exceptions:

FFS

9.1.10.2.5 Test requirement

Table 9.1.10.2.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP FDD relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.10.2.5-3.

Table 9.1.10.2.5-1: General test parameters for E-UTRAN RSRP FDD relative accuracy under timedomain measurement resource restriction with MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
E-UTRARF Channel Number		1	One FDD carrier frequency is used
Channel Bandwidth (BW _{channel})	MHz	10	For both cells in the test
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are selected
		=0, PCI _{cell1} not equal to	randomly so that the condition is met
		PCI _{cell2}	
ABS pattern			MBSFN ABS pattern. FDD ABS Pattern Info IE,
		'01000000100000001000	as defined in TS 36.423, clause 9.2.54.
		00000010000001000000	Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 40 = 0. All ABS subframes are MBSFN
			subframes.
Time-domain measurement			Configured for Cell 2 measurements by
resource restriction pattern for		'010000010000001000	meas Subframe Pattern Neigh IE in
neighbour cell measurements on		00000010000001000000	meas Subframe Pattern ConfigNeigh, as defined
RF Channel 1			in TS 36.331, clause 6.3.5.
			meas Subframe CellList contains Cell 2.
Time-domain measurement		'00010000000100000001	Configured for measurements on Cell 1.
resource restriction pattern for		00000001000000010000'	
serving cell measurements			

Table 9.1.10.2.5-2: Cell Specific test parameters for E-UTRAN RSRP FDD relative accuracy under time-domain measurement resource restriction with MBSFN ABS

			To	st 1	To	st 2	Tes	e+ 3
Pai	rameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
Measurement ba	andwidth	n	22-	–27		–27	22-	– 27
	nce measurement	n_{PRB}	R.0		R.0		R.0	
channel defined			FDD	-	FDD	-	FDD	-
PDSCH allocation	PDSCH allocation		13—36	-	13—36	-	13—36	-
	H/PHICH Reference	n_{PRB}						
	nannel defined in		R.6	FDD	R.6	FDD	R.6 I	FDD
A.2.1							0.5	
OCNG Patterns	defined in FFS and		OP.8 FDD	OP.6 FDD	OP.8 FDD	OP.6 FDD	OP.8 FDD	OP.6 FDD
PBCH_RA			רטט	רטט	רטט	FDD	רטט	FDD
PBCH_RB								
PSS_RA								
SSS_RA								
PCFICH_RB PHICH_RA								
PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA		QD.						
PDCCH_RB								
PDSCH_RA								
OCNG_RA ^{NOTE}	PDSCH_RB							
OCNG_RB Note1								
OONO_NB	Bands 1, 4, 6, 10,							
	11, 18, 19, 21, 23						-1	16
	and 24							
$N_{oc}^{ m Note~2}$	Bands 2, 5 and 7	ID (45.111	400	400	00	00		14
T oc	Band 25 Bands 3, 8, 12,	dBm/15 kHz	-106	-106	-88	-88	-11	2.5
	13, 14, 17, 20 and						-1	13
	22							
	Band 9						-115	
CRS \hat{E}_s/N_{oc}		dB	[5]	[-2]	[5]	[-4]	[5]	[-4]
	Bands 1, 4, 6, 10,							
	11, 18, 19, 21, 23				[-83]	[-92]	[-111]	[-120]
	and 24 Bands 2, 5 and 7						[-109]	[-118]
RSRP Note 3,4	Band 25	dBm/15 kHz	[-101]	[-108]				[-116.5]
	Bands 3, 8, 12,	G2, 10	[]		[00]		[[]
	13, 14, 17, 20 and						[-108]	[-117]
	22 Band 9						[-110]	[440]
	Bands 1, 4, 6, 10,						[-110]	[-119]
	11, 18, 19, 21, 23						[-81.63]	[-85.37]
(-)	and 24							
$(Io)_{meas}$ Note 3	Bands 2, 5 and 7	-ID (0 MILI	[74 44]	[74 00]	[[[0 0 0 0]	[[] 07]	[-79.63]	[-83.37]
in the 1 st OFDM	Band 25 Bands 3, 8, 12,	dBm/9 MHz	[-71.41]	[-74.88]	[-53.63]	[-57.37]	[-78.13]	[-81.87]
symbol	13, 14, 17, 20 and						[-78.63]	[-82.37]
	22						[. 0.00]	[02.01]
	Band 9						[-80.63]	[-84.37]
	Bands 1, 4, 6, 10,						[04 62]	[96 761
$(Io)_{meas}$ Note 3	11, 18, 19, 21, 23 and 24						[-81.63]	[-86.76]
in OFDM	Bands 2, 5 and 7						[-79.63]	[-84.76]
symbols other	Band 25	dBm/9 MHz	[-71.41]	[-76.09]	[-53.63]	[-58.76]	[-78.13]	[-83.26]
than the 1 st	Bands 3, 8, 12,	_ = ===================================	[,,,,,]	[1000]	[00.00]	[30.70]	[70 00]	1.00 703
one	13, 14, 17, 20 and 22						[-78.63]	[-83.76]
	Band 9						[-80.63]	[-85.76]
		l .	I	l	l	l	[]]

Propagation condition	AWGN	AWGN	AWGN

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.

Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.

Note 4: Applies to restricted measurement subframes of the respective cell.

Table 9.1.10.2.5-3: RSRP FDD Carrier Aggregation relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3					
	All bands	All bands	Bands 1, 4, 6, 10, 11, 18, 19,21, 23, 24	Bands 2, 5, 7, 26, 27	Band 25	Bands 3, 8, 12,13, 14, 17, 20, 22	Band 9	
Nomal Conditions								
Lowest reported	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	
value (Cell 2)	10+TT	12+TT	12+TT	12+TT	12+TT	12+TT	12+TT	
Highest reported	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	
value (Cell 2)	4+TT	6+TT	6+TT	6+TT	6+TT	6+TT	6+TT	
Extreme Conditions			_					
Lowest reported	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	
value (Cell 2)	12+TT	14+TT	14+TT	14+TT	14+TT	14+TT	14+TT	
Highest reported	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	RSRP_x-	
value (Cell 2)	2+TT	4+TT	4+TT	4+TT	4+TT	4+TT	4+TT	
RSRP_x is the repo	rted value of C	ell 1	-	•	•	•		

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.11 TDD RSRP Accuracy E-UTRA under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

9.1.11.1 TDD Absolute RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- Connection diagram for this test is undefined.
- Message Contents for this test are undefined
- The Test Tolerances applicable to this test are undefined.
- Cell specific parameters table is FFS.

9.1.11.1.1 Test purpose

To verify that TDD absolute RSRP measurement accuracy measurements under time -domain measurement resource restriction with MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions. This test will verify the TDD absolute RSRP accuracy.

9.1.11.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting eICIC. Applicability requires support for FGI bit 115.

9.1.11.1.3 Minimum conformance requirements

The TDD RSRP measurements of cells shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.3.

The accuracy requirements in table 9.1.11.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.1 for a corresponding Band.

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.11.1.3-1: RSRP Intra frequency absolute accuracy under time domain measurement resource restriction

Parameter	Unit	Accura	cy [dB]		Conditions ^{1,2}					
		Normal	Extrem	Bands 1, 4, 6,	Bands 2, 5, 7,	Band 25	Band 26	Band 28	Bands 3, 8,	Bands 9
		conditi	е	10, 11, 18, 19,	27, 41, [44]				12, 13, 14, 17,	
		on	conditi	21, 24, 33, 34,					20, 22	
			on	35, 36, 37, 38,						
				39, 40, 42, 43						
				lo	lo	lo	lo	lo	lo	lo
RSRP for	dBm	±6	±9	-	-	-	-	-	-	-
Ês/lot ≥ -4				121dBm/15kH	119dBm/15kH	117.5dBm/15k	118.5dBm/15k	119.5dBm/15k	118dBm/15kH	120dBm/15kH
dB				z70dBm/	z70dBm/	Hz70dBm/	Hz70dBm/	Hz70dBm/	z70dBm/	z70dBm/
				BW _{Channel}	BW _{Chan nel}	BW _{Channel}	BW _{Chan nel} ³	BW Channel	BW _{Channel}	BW _{Channel}
RSRP for	dBm	±8	±11	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/	-70dBm/
Ês/lot ≥ -4				BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}	BW _{Channel}
dB				50dBm/	50dBm/	50dBm/	50dBm/	50dBm/	50dBm/	50dBm/
				BW _{Channel}	BW _{Channel}	BW _{Channel}	BW Channel	BW Channel	BW _{Channel}	BW _{Channel}

Note 1: lo is assumed to have constant EPRE across the bandwidth.

Note 2: lo is defined over REs in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell.

Note 3: The condition is -119dBm/15kHz...-70dBm/BW_{Channel} when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.11.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.11.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.3, clause 9.1.4 and A.9.1.11

9.1.11.1.4 Test description

9.1.11.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: FFS.

Channel Bandwidth to be tested: FFS.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure FFS.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.11.1.4.3.
- 4. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.11.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.1.11.1.5-1 and 9.1.11.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 1 and Cell 2 are compared to the actual RSRP values according to Table 9.1.11.1.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.1.11.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause FFS with the following exceptions:

FFS

9.1.11.1.5 Test requirement

Table 9.1.11.1.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP TDD absolute accuracy test shall meet the reported values test requirements in table 9.1.11.1.5-3.

Table 9.1.11.1.5-1: General test parameters for E-UTRAN TDD RSRP intra-frequency test parameters under time-domain measurement resource restriction with MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
E-UTRARF Channel Number		1	One TDD carrier frequency is used
Channel Bandwidth (BWchannel)	MHz	10	For both cells in the test
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe
			configurations see Table 4.2-1 in [9].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [9].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are selected
_		=0, PCI _{cell1} not equal to	randomly so that the condition is met
		PCI _{cell2}	
ABS pattern			MBSFN ABS pattern. TDD ABS Pattern Info IE,
		'0000100000000100000'	as defined in TS 36.423, clause 9.2.54.
			Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 20 = 0. All ABS subframes are MBSFN
			subframes.
Time-domain measurement			Configured for Cell 2 measurements by
resource restriction pattern for		'0000100000000100000'	meas Subframe Pattern Neigh IE in
neighbour cell measurements on			meas Subframe Pattern ConfigNeigh, as defined
RF Channel 1			in TS 36.331 clause 6.3.5.
			meas Subframe CellList contains Cell 2.
Time-domain measurement			Configured for measurements on Cell 1.
resource restriction pattern for		'100000000100000000'	
serving cell measurements			

Table 9.1.11.1.5-2: Cell-specific test parameters for E-UTRAN TDD RSRP intra-frequency test parameters under time-domain measurement resource restriction with MBSFN ABS

Para	meter	Unit	Tes	st 1	Tes	st 2	Tes	st 3
Faia	ineter	Offic	Cell 1	Cell 2	Cell 1 Cell 2		Cell 1	Cell 2
Measurement bar		n_{PRB}		–27		–27	22–	–27
PDSCH Reference channel defined in			R.0 TDD	-	R.0 TDD	-	R.0 TDD	-
PDSCH allocation			13—36	_	13—36	-	13—36	-
	PHICH Reference	n_{PRB}	13—30	_	13—30	_	13—30	_
measurement cha			R.6	TDD	R.6	TDD	R.6	TDD
A.2.2								
OCNG Patterns d	lefined in FFS and		OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD
PBCH_RA			100	100	100	100	100	100
PBCH_RB		1						
PSS_RA SSS_RA		<u> </u>						
PCFICH_RB		-						
PHICH_RA								
PHICH_RB PDCCH_RA		dB	0	0	0	0	0	0
PDCCH_RB		1						
PDSCH_RA]						
PDSCH_RB		-						
OCNG_RANOTE1 OCNG_RB NOTE1		-						
$N_{oc}^{ m Note 2}$	N _{oc} Note 2 Bands 33, 34, 35, 36, 37, 38, 39, 40		-106	-106	-88	-88	-116 -115	
	Bands 42, 43 Band 41	-					-1 -1	
CRS \hat{E}_s/N_{oc}		dB	[5]+TT	[-2]+TT	[5]+TT	[-4]+TT	[5]+TT	[-4]+TT
ST OC	Bands 33, 34, 35, 36, 37, 38, 39, 40					- [- +TT 92]+TT	[- 111]+T T	[- 120]+T T
RSRP Note 3,4	Bands 42, 43	dBm/15 kHz	[- 101]+T T	[- 108]+T T	[- 83]+TT		[- 110]+T T	[- 119]+T T
	Band 41						[- 109]+T T	[- 118]+T T
(Io) Note 3	Bands 33, 34, 35, 36, 37, 38, 39, 40		_	_		_	[- 81.63]+ TT	[- 85.37]+ TT
$(Io)_{meas}^{Note 3}$ in the 1 st OFDM symbol	Bands 42, 43	dBm/9 MHz	[- 71.41]+ TT	[- 74.88]+ TT	[- 53.63]+ TT	[- 57.37]+ TT	[- 80.63]+ TT	[- 84.37]+ TT
·	Band 41						[- 79.63]+ TT	[- 83.37]+ TT
(Io) _{meas} Note 3	Bands 33, 34, 35, 36, 37, 38, 39, 40		r	r	r	r	[- 81.63]+ TT	[- 86.76]+ TT
in OFDM symbols other than the 1 st one	Bands 42, 43	dBm/9 MHz	[- 71.41]+ TT	[- 76.09]+ TT	[- 53.63]+ TT	[- 58.76]+ TT	[- 80.63]+ TT	[- 85.76]+ TT
	Band 41						[- 79.63]+ TT	[- 84.76]+ TT
Propagation cond	ition		AW	GN	AW	GN	AW	GN

Note 4:

Note 1:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
Note 2:	Interference from other cells and noise sources not specified in the test is assumed to be constant over
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
	Applies to all subframes.
Note 3:	RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.

Table 9.1.11.1.5-3: RSRP TDD Carrier Aggregation absolute accuracy requirements for the reported

Applies to restricted measurement subframes of the respective cell.

	Test 1	Test 2	Test 3		
	All bands	All bands	Bands 33, 34, 35, 36, 37, 38, 39, 40	Bands 42, 43	Band 41
Nomal Conditions					
Lowest reported value (Cell 2)	RSRP_24	RSRP_40	RSRP_12	RSRP_13	RSRP_14
	+TT	+TT	+TT	+TT	+TT
Highest reported value (Cell 2)	RSRP_40	RSRP_56	RSRP_28	RSRP_29	RSRP_30
	+TT	+TT	+TT	+TT	+TT
Extreme Conditions					
Lowest reported value (Cell 2)	RSRP_22	RSRP_38	RSRP_10	RSRP_11	RSRP_12
	+TT	+TT	+TT	+TT	+TT
Highest reported value (Cell 2)	RSRP_42	RSRP_58	RSRP_30	RSRP_31	RSRP_32
	+TT	+TT	+TT	+TT	+TT

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.11.2 TDD Relative RSRP under Time-Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- Connection diagram for this test is undefined.
- Message Contents for this test are undefined.
- The Test Tolerances applicable to this test are undefined.
- Cell specific parameters table is FFS.

9.1.11.2.1 Test purpose

To verify that TDD relative RSRP measurement accuracy under time-domain measurement resource restriction with MBSFN ABS configured in the aggressor cell is within the specified limits under AWGN propagation conditions. This test will verify the TDD relative RSRP accuracy requirements.

9.1.11.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting eICIC. Applicability requires support for FGI bit 115.

9.1.11.2.3 Minimum conformance requirements

The TDD RSRP relative measurements of cells shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.4.

The accuracy requirements in Table 9.1.11.2.3-1 for relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex B.3.4 for a corresponding Band

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRP measurement,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.1.11.2.3-1: RSRP Intra frequency relative accuracy under time domain measurement resource restriction

Paramet	Unit	Accura	cy [dB]		Conditions 1,4,5						
er		Normal	Extreme	Bands 1, 4, 6,	Bands 2, 5,	Band 25	Band 26	Band 28	Bands 3, 8,	Band 9, 42,	
		conditio	conditio	10, 11, 18, 19,	7, 27, 41,				12, 13, 14,	43	
		n	n	21, 24, 33, 34,	[44]				17, 20, 22		
				35, 36, 37, 38,							
				39, 40							
				lo	lo		lo	lo	lo	lo	
RSRP for	dBm	±2	±3	-	-	-	-	-	-	-	
Ês/lot ≥ -				121dBm/15kHz	119dBm/15k	117.5dBm/15	118.5dBm/15	119.5dBm/15	118dBm/15kH	120dBm/15kH	
2 dB				50dBm/	Hz	kHz	kHz	kHz	z50dBm/	z50dBm/	
				BW _{Channel}	50dBm/	50dBm/	50dBm/	50dBm/	BW _{Channel}	BW _{Channel}	
					BW _{Channel}	BW Channel	BW _{Channel} ⁴	BW Channel			
RSRP for	dBm	±3	±3	-	-	-	-	-119.5dBm/	-	-	
Ês/lot ≥ -				121dBm/15kHz	119dBm/15k	117.5dBm/15	118.5dBm/15	BW _{Channel}	118dBm/15kH	120dBm/15kH	
4 dB				50dBm/	Hz	kHz	kHz	50dBm/	z50dBm/	z50dBm/	
				BW _{Channel}	50dBm/	50dBm/	50dBm/	BW Channel	BW _{Channel}	BW _{Channel}	
					BW _{Channel}	BW _{Channel}	BW _{Chan nel} ⁴				

Note 1: lo is assumed to have constant EPRE across the bandwidth.

Note 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

Note 3: lo is defined over REs in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRP measurements of this cell.

Note 4: The condition is -119dBm/15kHz...-50dBm/BW_{Channel} when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz

The normative reference for this requirement is TS 36.133 [4] clause 9.1.2.4, clause 9.1.4 and A.9.1.11.

9.1.11.2.4 Test description

9.1.11.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: FFS.

Channel Bandwidth to be tested: FFS.

- 1. Connect the SS (node Bemulator) and AW GN noise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure FFS.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.11.2.4.3.
- 4. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.1.11.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.1.11.2.5-1 and 9.1.11.2.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.11.2.5-2.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.1.11.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause FFS with the following exceptions:

FFS

9.1.11.2.5 Test requirement

Table 9.1.11.2.5-2 defines the primary level settings including test tolerances for all tests.

The RSRP TDD relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.11.2.5-3.

Table 9.1.11.2.5-1: General test parameters for E-UTRAN RSRP TDD relative accuracy under timedomain measurement resource restriction with MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
E-UTRARF Channel Number		1	One TDD carrier frequency is used
Channel Bandwidth (BW _{channel})	MHz	10	For both cells in the test
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe configurations see Table 4.2-1 in [16].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [9].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6 =0, PCI _{cell1} not equal to PCI _{cell2}	Cell PCIs for Cell 1 and Cell 2 are selected randomly so that the condition is met
ABS pattern		'0000100000000100000'	MBSFN ABS pattern. TDD ABS Pattern Info IE, as defined in TS 36.423, clause 9.2.54. Configured in Cell 1. The first/leftmost bit corresponds to the subframe #0 of a radio frame satisfying SFN mod 20 = 0. All ABS subframes are MBSFN subframes.
Time-domain measurement resource restriction pattern for neighbour cell measurements on RF Channel 1		'0000100000000100000'	Configured for Cell 2 measurements by meas SubframePatternNeigh IE in meas SubframePatternConfigNeigh, as defined in TS 36.331 ,clause 6.3.5. meas SubframeCellList contains Cell 2.
Time-domain measurement resource restriction pattern for serving cell measurements		'100000000100000000'	Configured for measurements on Cell 1.

Table 9.1.11.2.5-2: Cell-specific test parameters for E-UTRAN TDD RSRP intra-frequency test parameters under time-domain measurement resource restriction with MBSFN ABS

Parar		Unit	A 11 4					Test 3	
			Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
Measurement bandwidth		n_{PRB}	22-	–27	22-	–27	22-	–27	
	PDSCH Reference measurement channel defined in A.3.1.1.2		R.0 TDD	-	R.0 TDD	-	R.0 TDD	-	
PDSCH allocation		n_{PRB}	13—36	-	13—36	-	13—36	-	
PDCCH/PCFICH/F	PHICH Reference	FKD							
measurement char A.3.1.2.2			R.6	TDD	R.6	TDD	R.6	TDD	
OCNG Patterns de (OP.5 TDD) and A.			OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD	
TDD) PBCH_RA									
PBCH_RB		-							
PSS_RA		1							
SSS_RA		-							
PCFICH_RB									
PHICH_RA									
PHICH_RB		dB	0	0	0	0	0	0	
PDCCH_RA									
PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG_RA ^{Note1}									
OCNG_RB Note:									
$N_{oc}^{ m Note~2}$	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/15 kHz	-106	-106	-88	-88	-1		
_	Bands 42, 43						-115		
	Band 41						-1	14	
CRS \hat{E}_s/N_{oc}		dB	[5]	[-2]	[5]	[-4]	[5]	[-4]	
RSRP Note 3,4	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/15 kHz	[-101]	[-108]	[-83]	[-92]	[-111]	[-120]	
	Bands 42, 43						[-110]	[-119]	
	Band 41						[-109]	[-118]	
$(Io)_{meas}^{Note 3}$ in the 1 st OFDM	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/9 MHz	[-71.41]	[-74.88]	[-53.63]	[-57.37]	[-81.63]	[-85.37]	
symbol	Bands 42, 43		' '				[-80.63]	[-84.37]	
S yIIIDOI	Band 41	1					[-79.63]	[-83.37]	
(Io) _{meas} Note 3	Bands 33, 34, 35, 36, 37, 38, 30, 40	dDee /C Mills	[74 44]	170.00	[50 00]	[50 70]	[-81.63]	[-86.76]	
in OFDM	39, 40	dBm/9 MHz	[-71.41]	[-76.09]	[-53.63]	[-58.76]	100.00	[0 5 7 6 7	
symbols other than the 1 st one	Bands 42, 43	4					[-80.63]	[-85.76]	
	Band 41		A1 A 4	ON	A) A /	ON	[-79.63]	[-84.76]	
Propagation condit	tion shall be used such	that bath salls =:	AW		AW		WA Awar		

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled. Applies to all subframes.

Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.

Note 4: Applies to restricted measurement subframes of the respective cell.

Table 9.1.11.2.5-3: RSRP TDD Carrier Aggregation relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3		
	All bands	All bands	Bands 33, 34, 35, 36, 37, 38, 39, 40	Bands 42, 43	Band 41
Nomal Conditions					
Lowest reported value (Cell 2)	RSRP_x- 10+TT	RSRP_x- 12+TT	RSRP_x- 12+TT	RSRP_x- 12+TT	RSRP_x- 12+TT
Highest reported value (Cell 2)	RSRP_x- 4+TT	RSRP_x- 6+TT	RSRP_x- 6+TT	RSRP_x- 6+TT	RSRP_x- 6+TT
Extreme Conditions					
Lowest reported value (Cell 2)	RSRP_x- 12+TT	RSRP_x- 14+TT	RSRP_x- 14+TT	RSRP_x- 14+TT	RSRP_x- 14+TT
Highest reported value (Cell 2)	RSRP_x- 2+TT	RSRP_x- 4+TT	RSRP_x- 4+TT	RSRP_x- 4+TT	RSRP_x- 4+TT
RSRP_x is the reported value of	Cell 1		•	•	•

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.9.2 RSRQ.

9.1.12

9.1.13

9.1.13.1 TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

• The Test Tolerances applicable to this test are undefined.

9.1.13.1.1 Test purpose

To verify that TDD absolute RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD absolute RSRP accuracy requirements of cells on the primary component carrier and the secondary component carrier under bandwidth of 20MHz.

9.1.13.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting CA.

9.1.13.1.3 Minimum conformance requirements

The TDD RSRP measurements of cells on the primary component carrier shall meet the absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1. The TDD RSRP measurements of cells on the secondary component carrier shall meet the absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.2.1.

The accuracy requirements in table 9.1.13.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP_{dBm} according to Annex I.3.1 for a corresponding Band.

Accı	ıracy					
Normal	Extreme	Ês/lot		lo ^{Note 1} range		
condition	condition	LS/IOC	E-UTRA operating bands	Mini	mum lo	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	N/A	-70
			9, 42, 43	-120	N/A	-70
			28	-119.5	N/A	-70
±6	±9	≥-6 dB	2, 5, 7, 27, 41, [44]	-119	N/A	-70
			26	-118.5 Note 2	N/A	-70
			3, 8, 12, 13, 14, 17, 20, 22	-118	N/A	-70
			29 Note 4	-118	N/A	-70
			25	-117.5	N/A	-70
±8	±11	≥-6 dB	Note 3	N/A	-70	-50

Note 1: lo is assumed to have constant EPRE across the bandwidth.

Note 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

Note 3: The same bands apply for this requirement as for the corresponding highest accuracy requirement.

Note 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRP is defined from -140 dBm to -44 dBm with 1 dB resolution.

The mapping of measured quantity is defined in Table 9.1.13.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.1.13.1.3-2: RSRP measurement report mapping

Reported value	Measured quantity value	Unit
RSRP_00	RSRP < -140	dBm
RSRP_01	-140 ≤ RSRP < -139	dBm
RSRP_02	-139 ≤ RSRP < -138	dBm
RSRP_95	-46 ≤ RSRP < -45	dBm
RSRP_96	-45 ≤ RSRP < -44	dBm
RSRP_97	-44 ≤ RSRP	dBm

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2 clause 9.1.4 and A.9.1.13.

9.1.13.1.4 Test description

9.1.13.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.13.1.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.13.1.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCC is configured and activated. The absolute accuracy of RSRP is defined as the RSRP measured from the primary component carrier (Cell 1) and the RSRP measured from the secondary component carrier (Cell 2 and Cell 3).

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. The SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.1.13.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. The SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. The UE shall transmit periodically MeasurementReport messages.
- 9. The SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP values for Cell 1 and Cell 2 are compared to the actual RSRP values according to Table 9.1.13.1.5-2. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. The SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pas s or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

9.1.13.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.13.1.4.3-1: Common Exception messages for TDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-3			
	Table H.4.2-1			
	Table H.4.1-5			

9.1.13.1.5 Test requirement

Table 9.1.13.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD absolute accuracy test shall meet the reported values test requirements in table 9.1.13.1.5-2.

Table 9.1.13.1.5-1: RSRP TDD absolute accuracy carrier aggregation test parameters

	Parameter	Unit		Test 1		
	Parameter	Onit	Cell 1	Cell 2	Cell 3	
BW _{channel}	NOTE 1	MHz		20		
Measurer	ment bandwidth	n_{PRB}	47—52			
PDSCH F defined in	Reference measurement channel n A.1.2		R.3 TDD	R.3 TDD	N/A	
PDSCH a	allocation	n_{PRB}	38—61	38—61	N/A	
	PCFICH/PHICH Reference ment channel defined in A.2.2			R.10 TDD		
	atterns defined in D.2.7 (OP.7 TDD) 8 (OP.8 TDD)		OP.7 TDD	OP.7 TDD	OP.8 TDD	
lo ^{Note2}	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/9 MHz	-84.75	(lo for Cl	hannel 1	
	Bands 42, 43 Band 41	dbiii/9 Wii iz	-83.75 -82.75	+5.3	3dB)	
[Note 1: This test verifies the RRM requirement which is independent of channel bandwidth and is						
Note 2:	performed according to the principle lo levels have been derived from othe settable parameters themselves.				ey are not	
Note 3:	See Table 9.1.7.1.5-1 for the other pa	arameters.				

Table 9.1.13.1.5-2: RSRP TDD Carrier Aggregation absolute accuracy requirements for the reported values

Parameter	Test 1			
Band of Cell 1 on Primary Component Carrier	Bands 33, 34, 35, 36, 37, 38, 39, 40	Bands42, 43	Band 41	
Nomal Conditions		ı		
Lowest reported value (Cell 1)	RSRP_12	RSRP_13	RSRP_14	
Highest reported value (Cell 1)	RSRP_27	RSRP_28	RSRP_29	
Lowest reported value (Cell 2)	RSRP_20	RSRP_21	RSRP_22	
Highest reported value (Cell 2)	RSRP_35	RSRP_36	RSRP_37	
Extreme Conditions	•			
Lowest reported value (Cell 1)	RSRP_9	RSRP_19	RSRP_11	
Highest reported value (Cell 1)	RSRP_30	RSRP_31	RSRP_32	
Lowest reported value (Cell 2)	RSRP_17	RSRP_18	RSRP_19	
Highest reported value (Cell 2)	RSRP_38	RSRP_39	RSRP_40	
	mines the levels for both nly on the band of Cell 1,	•	•	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.1.13.2 TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

• The Test Tolerances applicable to this test are undefined.

9.1.13.2.1 Test purpose

To verify that TDD relative RSRP measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD relative RSRP accuracy requirements of cells between the primary and secondary component carrier and TDD relative RSRP accuracy of cells on the secondary component carriers.

9.1.13.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward supporting CA.

9.1.13.2.3 Minimum conformance requirements

The TDD RSRP relative measurements of cells on PCC and SCC shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.3.2. The TDD RSRP relative measurements of cells on the SCC shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.2.

The accuracy requirements in Table 9.1.13.2.3-1 for PCC-SCC relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.8 for a corresponding Band

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le 27dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.1.13.2.3-1: TDD RSRP relative accuracy for PCC and SCC

Accuracy			Conditions				
Normal	Extreme	Ës/lot Note	s/lot Note lo Note range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±6	±6	≥-6 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 4	-118	-50		
			25	-117.5	-50		

Note 1: lo is assumed to have constant EPRE across the bandwidth.

Note 2: The parameter £s/lot is the minimum £s/lot of the pair of cells to which the requirement applies.

Note 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

Note 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.3, clause 9.1.4 and A.9.1.13.

The TDD RSRP relative measurements of cells on SCCs shall meet relative accuracy requirements defined in TS 36.133 clause 9.1.2.2.

The accuracy requirements in Table 9.1.13.2.3-2 for SCCs relative accuracy requirements are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled.

RSRP1,2_{dBm} according to Annex I.3.8 for a corresponding Band.

-50

-50

-50

-50

-50

Note 4

-119

-118

-118

-117.5

Note 4

-118.5

Normal condition dB

+2

±3

Accur

racy		Conditions					
Extreme	Es/lot Note	lo ^{note 1} r					
condition	2	E-UTRA operating bands	Minimum Io	Maximum lo			
dB	dB		dBm/15kHz	dBm/BW _{Channel}			
		1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50			
		9, 42, 43	-120	-50			
		28	-1195	-50			

Table 9.1.13.2.3-2: TDD RSRP relative accuracy for SCCs

Note 1: lo is assumed to have constant EPRE across the bandwidth.

≥-3 dB

≥-6 dB

Note 2: The parameter £s/lot is the minimum £s/lot of the pair of cells to which the requirement applies.

Note 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

29 ^{No}

26

3, 8, 12, 13, 14, 17, 20, 22

Note 4

Note 5

Note 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

Note 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.2, 9.1.11.3, clause 9.1.4 and A.9.1.13.

9.1.13.2.4 Test description

±3

±3

9.1.13.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS and AWGN noise source to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.1.13.2.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.1.13.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the activation MAC-CE (Refer TS 36.321 [13], clauses 5.13, 6.1.3.8). Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.1.13.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.

- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically MeasurementReport messages.
- 9. SS shall check the reported RSRP values in MeasurementReport messages. The reported RSRP value for Cell 2 is compared to the reported RSRP value for Cell 1 for each MeasurementReport message according to Table 9.1.13.2.5-2. Also the reported RSRP value for Cell 3 is compared to the reported RSRP value for Cell 2 for each MeasurementReport message according to Table 9.1.13.2.5-2. This counts respectively as a Pass or Fail for the events "Cell 1-2" and "Cell 2-3".
- 10. SS shall check the MeasurementReport messages transmitted by the UE until a test verdict has been achieved.

Each of the events "Cell 1-2" and "Cell 2-3" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

9.1.13.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.1.13.2.4.3-1: Common Exception messages for TDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-3			
	Table H.4.2-1			
	Table H.4.1-5			

9.1.13.2.5 Test requirement

Table 9.1.13.2.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRP TDD relative accuracy test shall meet the RSRP accuracy requirements in table 9.1.13.2.5-2.

Table 9.1.13.2.5-1: RSRP TDD relative accuracy carrier aggregation test parameters

	Doromotor	Unit		Test 1		
	Parameter	Unit	Cell 1	Cell 2	Cell 3	
BW _{channel} Note		MHz		20		
Measuremen	t bandwidth	n_{PRB}	47—52			
PDSCH Refe defined in A.1	rence measurement channel 1.2		R.3 TDD	R.3 TDD	N/A	
PDSCH alloc	ation	n_{PRB}	38—61	38—61	N/A	
	ICH/PHICH Reference t channel defined in A.2.2		R.10 TDD			
OCNG Patter and D.2.8 (O	rns defined in D.2.7 (OP.7 TDD) P.8 TDD)		OP.7 TDD	OP.7 TDD	OP.8 TDD	
lo ^{Note2}	Bands 33, 34, 35, 36, 37, 38, 39, 40	- dBm/9 MHz	-84.75	(lo for Cl	hannel 1	
	Bands 42, 43 Band 41	-	-83.75 -82.75	1	3dB)	
[Note 1: This test verifies the RRM requirement which is independent of channel bandwidth ar					dth and is	
Note 2: lo	rformed according to the principle levels have been derived from oth ttable parameters themselves.				ey are not	
Note 3: See Table 9.1.7.2.5-1 for the other parameters.						

Table 9.1.13.2.5-2: RSRP TDD Carrier Aggregation relative accuracy requirements for the reported values

	Test 1
	All bands
Normal and Extreme Conditions	
Lowest reported value (Cell 2)	RSRP_x – 1
Highest reported value (Cell 2)	RSRP_x + 17
Lowest reported value (Cell 3)	RSRP_y-8
Highest reported value (Cell 3)	RSRP_y + 1
RSRP_x is the reported value of Cell 1	
RSRP_y is the reported value of Cell 2	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.1 FDD Intra frequency RSRQ Accuracy

9.2.1.1 FDD Intra Frequency Absolute RSRQ Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.1.1.1 Test purpose

To verify that the FDD intra frequency absolute RSRQ measurement accuracy is within the specified limit for all bands.

9.2.1.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.2.1.1.3 Minimum conformance requirements

The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell on the same frequency as that of the serving cell.

The accuracy requirements in table 9.2.1.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.1 for a corresponding Band.

Table 9.2.1.1.3-1: RSRQ FDD intra frequency absolute accuracy

Accuracy		Conditions			
Normal	Extreme	Ês/lot	lo ^{Note 1} I	ange	
condition	condition	L3/10t	E-UTRA operating bands	Minimum Io	Maximum lo
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50
			9, 42, 43	-120	-50
			28	-119.5	-50
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50
			26	-118.5 Note 2	-50
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50
			29 Note 4	-118	-50
			25	-117.5	-50
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.1.1.3-2.

Table 9.2.1.1.3-2: RSRQ FDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.5.1 and A.9.2.1.

9.2.1.1.4 Test description

9.2.1.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.1.1.4.3.
- 4. There is one E-UTRA FDD carrier and two cells specified in each test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

9.2.1.1.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell on the same frequency as that of the serving cell, Cell 1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.1.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.1.1.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.2.1.1.5-2 as appropriate.

9.2.1.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.1.1.4.3-1: Common Exception messages for RSRQ FDD intra frequency absolute accuracy test requirement

Default Message Contents					
Common contents of system information					
blocks exceptions Default RRC messages and information	Table H.3.1-1				
elements contents exceptions	Table H.3.5-1				
	Table H.3.5-4				

Table 9.2.1.1.4.3-2: *MeasResults*: Additional RSRQ FDD intra frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5	Value /ne me entr	Commont	Condition
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the	
		measurement id for	
		the reporting being	
		performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult		Set according to	
		specific test	
}			
measResultNeighCells CHOICE {			
m eas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.1.1.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD intra frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.1.1.5 Test requirement

Table 9.2.1.1.5-2 defines the primary level settings including test tolerances for all tests .

Each RSRQ FDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.1.1.5-3.

Table 9.2.1.1.5-1: Void

Table 9.2.1.1.5-2: Cell Specific Test requirement Parameters for RSRQ FDD intra frequency absolute accuracy

Par	rameter	Unit	Tes	st 1	Tes	t 2	Tes	t 3
		Offic	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Cha	annel Number	N/LJ -	1		1		1 10	
BW _{channel}		MHz	10		10			
Measurement b		n_{PRB}	22–	- 27	22–	-27	22–	-27
	nce measurement		R.0	-	R.0	-	R.0	-
channel defined			FDD		FDD		FDD	
PDSCH allocati		n_{PRB}	13—36	-	13—36	-	13—36	-
PDCCH/PCFICH/PHICH Reference measurement channel defined in			R.6 I	בחח	R.6 F	חח	R.6 F	חח
A.2.1	nanner denned in		N.0 I	טט	1.01	טט	1.01	טט
	defined in D.1.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2
	D.1.2 (OP.2 FDD)		FDD	FDD	FDD	FDD	FDD	FDD
PBCH_RA PBCH_RB								
PSS_RA								
SSS RA								
PCFICH_RB								
PHICH_RA			_	_	_	_	_	_
PHICH_RB PDCCH_RA		dB	0	0	0	0	0	0
PDCCH_RB								
PDSCH_RA								
PDSCH_RB	PDSCH_RB							
OCNG_RANGE1								
OCNG_RB ^{Note1}	ID 1 4 4 0 40							
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24					-103.85	-116	
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26 Note 5, 27	dBm/15 kHz	-85.51	-85.51	-103.85		-114	
	Band 25 Band 28						-112.5 -114.5	
	Bands 3, 8, 12,							
	13, 14, 17, 20, 22						-1 ⁻	13
	Band 9						-1 <i>°</i>	15
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	-1.76	-1.76	-4.7	-4.7	-5.17	-5.17
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23,						-119.60	-119.60
	24							
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/15 kHz	-82.51	00.54	-106.75	400.75	-117.60	-117.60
KSKF	Band 25	UDIII/13 KHZ	-02.31	-82.51	-100.75	-106.75	-116.10	-116.10
	Band 28						-118.10	-118.10
	Bands 3, 8, 12, 13, 14, 17, 20, 22						-116.60	-116.60
	Band 9						-118.60	-118.60
	Bands 1, 4, 6, 10,							
	11, 18, 19, 21, 23, 24							
	Bands 2, 5, 7, 26							
RSRQ ^{Note3}	Note 5, 27	٩D	4477	1177	16.70	16.70	17 10	17.40
KOKU	Band 25	dB	-14.77	-14.77	-16.76	-16.76	-17. 12	-17. 12
	Band 28							
	Bands 3, 8, 12, 13, 14, 17, 20, 22							
	Band 9							
<u></u>	•	<u> </u>	1	<u>I</u>	I	<u>I</u>	I	

	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-85	.49
lo ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/9 MHz	-50.75	-50.75	-73	-73	-83.49	
	Band 25						-81.99	
	Band 28						-83	.99
	Bands 3, 8, 12,						-82.49	
	13, 14, 17, 20, 22						-02.43	
	Band 9						-84	.49
\hat{E}_s/N_{oc}		dB	3	3	-2.9	-2.9	-3.6	-3.6
Propagation	condition	-	AW	GN	AW	GN	AW	GN

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.
- Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz

Table 9.2.1.1.5-3: RSRQ FDD Intra frequency absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
	All bands	All bands	All bands
	Nomal Conditi	ons	
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_14	RSRQ_14
	Extreme Condit	ions	
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_15	RSRQ_15

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.2 TDD Intra frequency RSRQ Accuracy

9.2.2.1 TDD Intra Frequency Absolute RSRQ Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.2.1.1 Test purpose

To verify that the TDD intra frequency absolute RSRQ measurement accuracy is within the specified limit for all TDD bands.

9.2.2.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bit 16.

9.2.2.1.3 Minimum conformance requirements

The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell on the same frequency as that of the serving cell.

The accuracy requirements in table 9.2.2.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 Section 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.1 for a corresponding Band.

Table 9.2.2.1.3-1: RSRQ TDD intra frequency absolute accuracy

Accı	uracy		Conditions			
Normal	Extreme	Ês/lot	lo Note range			
condition	condition	LS/IO	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 2	-50	
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50	
			29 Note 4	-118	-50	
			25	-117.5	-50	
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution.

The mapping of measured quantity is defined in Table 9.2.2.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.2.2.1.3-2: RSRQ TDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.5.1, 9.1.7 and A.9.2.2.

9.2.2.1.4 Test description

9.2.2.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. Propagation conditions are set according to Annex B clause B.0.

- 3. Message contents are defined in clause 9.2.2.1.4.3.
- 4. There is one E-UTRA TDD carrier and two cells specified in each test. Cell 1 is the cell used for call setup with the power level set according to clause C.0 and C.1 for this test.

9.2.2.1.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell on the same frequency as that of the serving cell, Cell 1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.2.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ according to Table 9.2.2.1.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.2.2.1.5-2 as appropriate.

9.2.2.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.2.1.4.3-1: Common Exception messages for RSRQ TDD intra frequency absolute accuracy test requirement

Default Message Contents					
Common contents of system information blocks exceptions					
Default RRC messages and information elements contents exceptions	Table H.3.1-1 Table H.3.5-1 Table H.3.5-4				

Table 9.2.2.1.4.3-2: *MeasResults*: Additional RSRQ TDD intra frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5	Walanda and	0	0
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
meaResuCellItsServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.2.1.4.3-3: MeasResultListEUTRA: Additional RSRQ TDD intra frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
measResultListEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId of Cell 2		
meas Result SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.2.1.5 Test requirement

Table 9.2.2.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ TDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.2.1.5-3.

Table 9.2.2.1.5-1: Void

Table 9.2.2.1.5-2: Cell Specific Test requirement Parameters for RSRQ TDD intra frequency absolute accuracy

D	arameter	Unit	Tes	st 1	Tes	st 2	Tes	st 3	
		Offic	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
	hannel Number		1		1		1		
BW _{channel}	NAVA	MHz	10		10			10	
	Special subframe configuration Note:		6	3	6		6		
Uplink-downlir	nk configuration Notes		1		1		1		
Measurement		$n_{\it PRB}$	22-	–27	22–	–27	22–	–27	
PDSCH Refer	rence measurement ed in A.1.2		R.0 TDD	-	R.0 TDD	-	R.0 TDD	-	
PDSCH alloca		$n_{\it PRB}$	13—36	-	13—36	-	13—36	-	
PDCCH/PCFI	CH/PHICH Reference	TRD							
	channel defined in		R.6	TDD	R.6	TDD	R.6	TDD	
OCNG Pattern	ns defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2	
(OP.1 TDD) ar	nd D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD	
PBCH_RA									
PBCH_RB									
PSS_RA									
SSS_RA									
PCFICH_RB	PCFICH_RB								
PHICH_RA									
PHICH_RB			0	0	0	0	0	0	
PDCCH_RA									
PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG_RA ^{NOTE}	12								
OCNG_RB ^{NOTE}	32								
	Bands 33, 34, 35,							10	
$N_{oc}^{ m Note3}$	36, 37, 38, 39, 40	/		-85.51	-103.85	-103.85	-1	16	
1 oc	Band 42, 43	dBm/15 kHz	-85.51				-1	15	
	Band 41, [44]						-1	14	
\hat{E}_s/I_{ot}	, , , , , , , , , , , , , , , , , , ,	dB	-1.76	-1.76	-4.7	-4.7	-5. 17	-5. 17	
	Bands 33, 34, 35,						110.60	110.60	
RSRP ^{Note4}	36, 37, 38, 39, 40	dDm /47 Lt L=	00.54	00.54	-106.75	100.75	-119.60	-119.60	
RSRP	Band 42, 43	dBm/15 kHz	-82.51	-82.51	-106.75	-106.75	-118.60	-118.60	
	Band 41, [44]						-117.60	-117.60	
	Bands 33, 34, 35,								
RSRQ ^{Note4}	36, 37, 38, 39, 40,	dB	-14.77	-14.77	-16.76	-16.76	-17. 12	-17. 12	
	41, 42, 43								
	Bands 33, 34, 35,					İ	0.5	40	
lo ^{Note4}	36, 37, 38, 39, 40	dBm/9 MHz	50.7F	50.7F	72	72	-85	. 4 9	
IIO	Band 42, 43		-50.75	-50.75	-73	-73	-84	.49	
	Band 41, [44]						-83	.49	
\hat{E}_s/N_{oc}	•	dB	3	3	-2.9	-2.9	-3.6	-3.6	
Propagation c	ondition	-	AW	GN	AW	GN	AW	GN	
	special subframe and	ınlink-downlink d							

- Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.
- Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.
- Note 4: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 5: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.2.2.1.5-3: RSRQ TDD Intra frequency absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
	All bands	All bands	All bands
	Nomal Conditi	ons	
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_14	RSRQ_14
	Extreme Condit	ions	
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_15	RSRQ_15

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.3 FDD - FDD Interfrequency RSRQ Accuracy

9.2.3.1 FDD - FDD Inter Frequency Absolute RSRQ Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.3.1.1 Test purpose

To verify that the FDD - FDD inter frequency absolute RSRQ measurement accuracy is within the specified limit for all bands.

9.2.3.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.3.1.3 Minimum conformance requirements

The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in table 9.2.3.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.3 for a corresponding Band.

Table 9.2.3.1.3-1: RSRQ FDD - FDD inter frequency absolute accuracy

Accı	ıracy		Conditions				
Normal	Extreme	Ês/lot	lo ^{Note 1} I	ange			
condition	condition	L3/10t	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 2	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 4	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.3.1.3-2.

Table 9.2.3.1.3-2: RSRQ FDD - FDD Inter frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.1 and A.9.2.3.

9.2.3.1.4 Test description

9.2.3.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.3.1.4.3.
- 4. There are two E-UTRA FDD carriers and one cell on each carrier specified in each test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

9.2.3.1.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell, Cell 1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.3.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.3.1.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each test interval in Table 9.2.3.1.5-2 as appropriate.

9.2.3.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.3.1.4.3-1: Common Exception messages for RSRQ FDD - FDD inter frequency absolute accuracy test requirement

Default Message Contents					
Common contents of system information blocks exceptions					
elements contents exceptions	Table H.3. 1-1 Table H.3.5-2 Table H.3.5-4				

Table 9.2.3.1.4.3-2: *MeasResults*: Additional RSRQ FDD - FDD inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			

Table 9.2.3.1.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD - FDD inter frequency absolute accuracy test requirement

Value/remark	Comment	Condition
PhysCellId		
Not present		
	Set according to specific test	
	Phys CellId	PhysCellId Not present Set according to

9.2.3.1.5 Test requirement

Table 9.2.3.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ FDD - FDD inter frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.3. 1.5-3.

Table 9.2.3.1.5-1: Void

Table 9.2.3.1.5-2: Cell Specific Test requirement Parameters for RSRQ FDD - FDD inter frequency absolute accuracy

Do.		Unit	Tes	st 1	Tes	st 2	Tes	st 3
	Parameter		Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number	NALL-	1	2	1	2	1	2
BW _{channel}	ap configuration	MHz	10	10	10	10	10	10
Measurement b			22-		22-		22-	
		n_{PRB}	22-	-21 -	22-	-2 <i>1</i>	22-	-21
channel defined	nce measurement I in A.1.1		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-
PDSCH allocati		n_{PRB}	13—36	-	13—36	-	13—36	-
	H/PHICH Reference hannel defined in		R.6 I	FDD	R.6 I	-DD	R.6 I	-DD
A.2.1								
	defined in D.1.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2
	d D.1.2 (OP.2 FDD)		FDD	FDD	FDD	FDD	FDD	FDD
PBCH_RA PBCH_RB								
PSS_RA								
SSS_RA								
PCFICH_RB								
PHICH_RA			_	_	_	_		_
PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA PDCCH_RB								
PDSCH RA								
PDSCH_RB								
OCNG_RA ^{Note 1}								
OCNG_RB ^{NOIET}								
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-119.5	-119.5
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26 Note 5, 27	dBm/15	00.0	00.0	-104.7	-104.7	-117.5	-117.5
00	Band 25	kHz	-80.0	-80.8	-104.7	-104.7	-116	-116
	Band 28						-118	-118
	Bands 3, 8, 12, 13, 14, 17, 20, 22						-116.5	-116.5
♠ / T	Band 9	4D	4.75	4.75	4	2.20	-118.5	-118.5
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	-1.75	-1.75	-4	-3.20	-4	-3.20
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-123.50	-122.70
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/15	01 75	92.55	100 70	407.00	-121.50	-120.70
NONE	Band 25	kHz	-81.75	-82.55	-108.70	-107.90	-120.00	-119.20
	Band 28						-122.0	-122.0
	Bands 3, 8, 12, 13,						-120.50	-119.70
	14, 17, 20, 22 Band 9						-122.50	-121.70
	Bands 1, 4, 6, 10,						122.00	121.70
	11, 18, 19, 21, 23, 24							
Don - Note?	Bands 2, 5, 7, 26 Note 5, 27				-16.25	-15.69		
RSRQ ^{Note3}	Band 25	dB	-14.76	-14.76			-16.25	-15.69
	Band 28							
	Bands 3, 8, 12, 13, 14, 17, 20, 22							
	Band 9							

	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-90.26	-90.02	
lo ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/9	-50.0	E0 0	-50.8 -75.46	-75.22	-88.26	-88.02	
10	Band 25	MHz	-50.0	-30.6	-73.40	-13.22	-86.76	-86.52	
	Band 28							-88.76	-88.52
	Bands 3, 8, 12, 13, 14, 17, 20, 22						-87.26	-87.02	
	Band 9						-89.26	-89.02	
\hat{E}_s/N_{oc}		dB	-1.75	-1.75	-4	-3.20	-4	-3.20	
Propagation condition		-	AW	GN	AW	GN	AW	GN	

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.
- Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz

Table 9.2.3.1.5-3: RSRQ FDD - FDD inter frequency absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
Normal Conditions			
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_16	RSRQ_16
Extreme Conditions			
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_17	RSRQ_17

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.3.2 FDD - FDD Inter Frequency Relative Accuracy of RSRQ

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.3.2.1 Test purpose

To verify that the FDD - FDD inter frequency relative accuracy measurement of RSRQ is within the specified limit for all bands.

9.2.3.2.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.3.2.3 Minimum conformance requirements

The relative accuracy of RSRQ in inter frequency case is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency.

The accuracy requirements in table 9.2.3.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.4 for a corresponding Band

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le \left[27 \right] dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.2.3.2.3-1: RSRQ FDD - FDD inter frequency relative accuracy

Accı	uracy		Conditions					
Normal	Extreme	Ës/lot Note	lo Note 1 range					
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo			
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}			
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50			
			9, 42, 43	-120	-50			
			28	-119.5	-50			
±3	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50			
			26	-118.5 Note 3	-50			
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50			
			29 Note 5	-118	-50			
			25	-117.5	-50			
±4	±4	≥-6 dB	Note 4	Note 4	Note 4			

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.3.2.3-2.

Table 9.2.3.2.3-2: RSRQ FDD - FDD Inter frequency relative accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.2 and A.9.2.3.

9.2.3.2.4 Test description

9.2.3.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.3.2.4.3.
- 4. There are two E-UTRA FDD carriers and one cell on each carrier specified in the test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

9.2.3.2.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The relative accuracy of RSRQ is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.3.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each MeasurementReport message.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each test interval in Table 9.2.3.2.5-2 as appropriate.

9.2.3.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.3.2.4.3-1: Common Exception messages for RSRQ FDD - FDD inter frequency relative accuracy test requirement

Default Message Contents					
Common contents of system information blocks exceptions					
elements contents exceptions	Table H.3. 1-1 Table H.3.5-2 Table H.3.5-4				

Table 9.2.3.2.4.3-2: MeasResults: Additional RSRQ FDD - FDD inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.3.2.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD - FDD inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.3.2.5 Test requirement

Table 9.2.3.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ FDD - FDD inter frequency relative accuracy test shall meet the reported values test requirements in Table 9.2.3.2.5-3.

Table 9.2.3.2.5-1: Void

Table 9.2.3.2.5-2: Cell Specific Test requirement Parameters for RSRQ FDD - FDD inter frequency relative accuracy

Do	ramatar	l lmit	Tes	st 1	Tes	st 2	Tes	t 3
	rameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number	NALL-	1	2	1	2	1	2
BW _{channel} Gap Pattern Id		MHz	10	10	10	10	10	10
Measurement b	and width		22-		22-		22-	
		n_{PRB}	22-	-2 <i>1</i>	22-	- <i>Z1</i>	22-	-21
channel defined	nce measurement I in A.1.1		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-
PDSCH allocati		n_{PRB}	13—36	-	13—36	-	13—36	-
	H/PHICH Reference hannel defined in		R.6 I	FDD	R.6 I	-DD	R.6 F	FDD
	defined in D.1.1 D.1.2 (OP.2 FDD)		OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD	OP.1 FDD	OP.2 FDD
PBCH_RA	,							
PBCH_RB PSS_RA								
SSS_RA								
PCFICH_RB								
PHICH_RA PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA		uБ		0	U	0	0	0
PDCCH_RB								
PDSCH_RA								
PDSCH_RB								
OCNG_RANOTE1								
OCNG_RB ^{NOIET}	_							
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-119.5	-119.5
$N_{oc}^{ m Note2}$	Bands 2, 5, 7, 26 Note 5, 27	dBm/15	-80.8	-80.8	-104.7	-104.7	-117.5	-117.5
00	Band 25	kHz	-00.0	-00.0	-104.7	-104.7	-116	-116
	Band 28 Bands 3, 8, 12, 13,						-118	-118
	14, 17, 20, 22 Band 9						-116.5 -118.5	-116.5 -118.5
Î /I	Band 9	dB	-1.75	-1.75	-4.0	-3.2	-4.0	-3.2
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	In	иь	-1./5	-1.75	-4.0	-3.2	-4.0	-3.2
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-123.50	-122.7
RSRP ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/15	-82.55	-82.55	-108.70	-107.90	-121.50	-120.7
r.or.	Band 25	kHz	02.00	02.00	100.70	107.00	-120.0	-119.2
	Band 28						-122.0	-121.20
	Bands 3, 8, 12, 13, 14, 17, 20, 22						-120.50	-119.7
	Band 9						-122.50	-121.7
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24							
- Note?	Bands 2, 5, 7, 26 Note 5, 27				-16.25	-15.69		
RSRQ ^{Note3}	Band 25	dB	-14.76	-14.76			-16.25	-15.69
	Band 28							
	Bands 3, 8, 12, 13, 14, 17, 20, 22							
	Band 9							

	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23, 24						-90.26	-90.02
lo ^{Note3}	Bands 2, 5, 7, 26 Note 5, 27	dBm/9 MHz	-50.8	-50.8	-50.8 -75.46	46 -75.22	-88.26	-88.02
10	Band 25						-86.76	-86.52
	Band 28						-88.76	-88.52
	Bands 3, 8, 12, 13, 14, 17, 20, 22						-87.26	-87.02
	Band 9						-89.26	-89.02
\hat{E}_s/N_{oc}		dB	-1.75	-1.75	-4.0	-3.2	-4.0	-3.2
Propagation	condition	-	AW	GN	AW	GN	AW	GN

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.
- Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.
- Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz

Table 9.2.3.2.5-3: RSRQ FDD inter frequency relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3			
Nomal Conditions		•	•			
Lowest reported value (Cell 2)	RSRQ_x-8	RSRQ_x-10	RSRQ_x-10			
Highest reported value (Cell 2)	RSRQ_x+8	RSRQ_x+10	RSRQ_x+10			
Extreme Conditions		•				
Lowest reported value (Cell 2)	RSRQ_x-10	RSRQ_x-10	RSRQ_x-10			
Highest reported value (Cell 2)	RSRQ_x + 10	RSRQ_x+10	RSRQ_x+10			
RSRQ_x is the reported value of Cell 1						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.4 TDD - TDD Interfrequency RSRQ Accuracy

9.2.4.1 TDD - TDD Inter Frequency Absolute RSRQ Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.4.1.1 Test purpose

To verify that the TDD - TDD inter frequency absolute RSRQ measurement accuracy is within the specified limit for all bands.

9.2.4.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.4.1.3 Minimum conformance requirements

The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in table 9.2.4.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or RSRQ value of Cell 2 reported by the UE four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.3 for a corresponding Band.

Table 9.2.4.1.3-1: RSRQ TDD - TDD inter frequency absolute accuracy

Accı	ıracy		Conditions				
Normal	Extreme	Ês/lot	lo ^{Note 1} r	range			
condition	condition	L3/10t	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 2	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 4	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3		

NOTE 1: Io is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.2.1.3-2.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.1 and A.9.2.4.

9.2.4.1.4 Test description

9.2.4.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.4.1.4.3.
- 4. There are two E-UTRA TDD carriers and one cell on each carrier specified in each test. Cell 1 is the cell used for call setup with the power level set according to clause C.0 and C.1 for this test.

9.2.4.1.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell, Cell 1. The Gap pattern configuration is with id#0 as defined in TS 36.133 clause 8.1.2.1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.4.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.4.1.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each test interval in Table 9.2.4.1.5-2 as appropriate.

9.2.4.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.4.1.4.3-1: Common Exception messages for RSRQ TDD - TDD inter frequency absolute accuracy test requirement

Default Message Contents						
Common contents of system information						
blocks exceptions						
Default RRC messages and information	Table H.3.1-1					
elements contents exceptions	Table H.3.5-2					
·	Table H.3.5-4					

Table 9.2.4.1.4.3-2: MeasResults: Additional RSRQ TDD - TDD inter frequency absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell	SEQUENCE {		
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m e as ResultLis tEUTRA	MeasResultListEUTRA		
}			

Table 9.2.4.1.4.3-3: MeasResultListEUTRA: Additional RSRQ TDD - TDD inter frequency absolute accuracy test requirement

Value/remark	Comment	Condition
PhysicalCellIdentity		
Not present		
	Set according to specific test	
	PhysicalCellIdentity	PhysicalCellIdentity Not present Set according to

9.2.4.1.5 Test requirement

Table 9.2.4.1.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ TDD inter frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.4.2.5-3.

Table 9.2.4.1.5-1: Void

Table 9.2.4.1.5-2: Cell Specific Test requirement Parameters for RSRQ TDD - TDD inter frequency absolute accuracy

D.	arameter	Unit	Tes	t 1	Tes	st 2	Tes	st 3
		Onit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
	hannel Number		1	2	1	2	1	2
BW _{channel}		MHz	10	10	10	10	10	10
Gap Pattern lo			0	-	0	-	0	-
Note1	ame configuration		6		6	3	6	3
Uplink-downli	nk configuration Note1		1		1		1	
Measurement		n_{PRB}	22—	-27	22-	–27	22-	-27
PDSCH Refer channel define	rence measurement ed in A.1.2		R.0 TDD	-	R.0 TDD	-	R.0 TDD	-
PDSCH alloca	ation	n_{PRB}	13—36	-	13—36	-	13—36	-
PDCCH/PCFI	CH/PHICH			ı				ı
Reference me defined in A.2	easurement channel .2		R.6 T	DD	R.6	TDD	R.6	ΓDD
	ns defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2
	nd D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD
PBCH_RA								
PBCH_RB								
PSS_RA								
SSS_RA								
PCFICH_RB								
PHICH_RA				_		_		
PHICH_RB		dB	0	0	0	0	0	0
	PDCCH_RA							
PDCCH_RB								
PDSCH_RA								
PDSCH_RB								
OCNG_RANGE	7.							
OCNG_RB ^{NOT}								
$N_{oc}^{ m Note3}$	Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Band 41, [44]	dBm/15 kHz	-80.0	-80.8	-104.7	-104.7	-119.5 -118.5 -117.5	-119.5 -118.5 -117.5
Ës/lot		dB	-1.75	-1.75	-4	-3.2	-4	-3.2
RSRP ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40	ID (45111	04.75	00.55	400.70	407.0	-123.50	-122.7
RSRP	Band 42, 43	dBm/15 kHz	-81.75	-82.55	-108.70	-107.9	-122.50	-121.7
	Band 41, [44]						-121.50	-120.7
RSRQ ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43	dB	-14.76	-14.76	-16.25	-15.69	-16.25	-15.69
lo ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40	dD.mo /C 8/11 1-	50.0	50.0	75.40	75.00	-90.26	-90.02
IO THE	Band 42, 43 Band 41, [44]	dBm/9 MHz	-50.0	-50.8	-75.46	-75.22	-89.26 -88.26	-89.02 -88.02
\hat{E}_s/N_{oc}		dB	-1.75	-1.75	-4	-3.2	-4	-3.2

Propagat	ion condition	-	AWGN	AWGN	AWGN			
Note 1:	1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.							
Note 2:	2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power							
	spectral density is achieve	ed for all OFDM sy	ymbols.					
Note 3:	Interference from other ce	lls and noise sou	rces not specified in th	ne test is assumed to	be constant over			
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.							
Note 4:	RSRQ, RSRP and lo levels have been derived from other parameters for information purpos es. They							
	are not settable parameters themselves.							
Note 5:	RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at							
	each receiver antenna po	rt.						

Table 9.2.4.1.5-3: RSRQ TDD - TDD inter frequency absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
Nomal Conditions			
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_16	RSRQ_16
Extreme Conditions			
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_00	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_17	RSRQ_17

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.4.2 TDD - TDD Inter Frequency Relative Accuracy of RSRQ

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.4.2.1 Test purpose

To verify that the TDD - TDD inter frequency relative accuracy measurement of RSRQ is within the specified limit for all bands.

9.2.4.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 8 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.4.2.3 Minimum conformance requirements

The relative accuracy of RSRQ in inter frequency case is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency.

The accuracy requirements in table 9.2.4.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

 $RSRP1,2|_{dBm}$ according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le \left[27 \right] dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.2.4.2.3-1: RSRQ TDD - TDD Inter frequency relative accuracy

Accı	ıracy	Conditions				
Normal	Extreme	Ës/lot Note	lo ^{Note 1} I	lo ^{Note 1} range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±3	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 3	-50	
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50	
			29 Note 5	-118	-50	
			25	-117.5	-50	
±4	±4	≥-6 dB	Note 4	Note 4	Note 4	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.2.1.3-2.

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.2 and A.9.2.4.

9.2.4.2.4 Test description

9.2.4.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.4.2.4.3.
- 4. There are two E-UTRA TDD carriers and one cell on each carrier specified in the test. Cell 1 is the cell used for call setup with the power level set according to clause C.0 and C.1 for this test.

9.2.4.2.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The relative accuracy of RSRQ is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency. The Gap pattern configuration is with id#0 as defined in TS 36.133 clause 8.1.2.1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.4.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.

- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value of Cell 1 and Cell 2 in Measurement Report messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each Measurement Report message according to Table 9.2.4.2.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each test interval in Table 9.2.4.1.5-2 as appropriate.

9.2.4.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.4.2.4.3-1: Common Exception messages for RSRQ TDD - TDD inter frequency relative accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-2			
·	Table H.3.5-4			

Table 9.2.4.1.4.3-2: *MeasResults*: Additional RSRQ TDD - TDD inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			•
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
measResultListEUTRA	MeasResultListEUTRA		
}			
]}			

Table 9.2.4.1.4.3-3: MeasResultListEUTRA: Additional RSRQ TDD - TDD inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
meas Result SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.4.2.5 Test requirement

Table 9.2.4.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ TDD inter frequency relative accuracy test shall meet the reported values test requirements in Table 9.2.4.2.5-3.

Table 9.2.4.2.5-1: Void

Table 9.2.4.2.5-2: Cell Specific Test requirement Parameters for RSRQ TDD - TDD inter frequency relative accuracy

Parameter		l lni4	Tes	t 1	Test	2	Tes	t 3
		Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
E-UTRARF Ch	annel Number		1	2	1	2	1	2
BW _{channel}		MHz	10	10	10	10	10	10
Gap Pattern Id			0	-	0	-	0	-
	ne configuration Notes		6		6		6	
Uplink-downlink	configuration Note1		1		1		1	
Measurement b		n_{PRB}	22–	-27	22—	27	22–	-27
	nce measurement		R.0 TDD	-	R.0 TDD	-	R.0 TDD	-
channel defined	d in A.1.2							
PDSCH allocati		n_{PRB}	13—36	-	13—36	-	13—36	-
	H/PHICH Reference							
measurement c A.2.2	hannel defined in		R.6	ΓDD	R.6 T	DD	R.6 7	ΓDD
	defined in D.2.1		OP.1	OP.2	OP.1	OP.2	OP.1	OP.2
	d D.2.2 (OP.2 TDD)		TDD	TDD	TDD	TDD	TDD	TDD
PBCH_RA	. J.Z.Z (OI .Z 1DD)		100	100	, , , ,	1.55	1,55	
PBCH_RB								
PSS_RA								
SSS_RA								
PCFICH_RB								
PHICH_RA								
PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA		QD						
PDCCH_RB								
PDSCH_RA								
PDSCH_RB]			
OCNG_RA								
OCNG_RB ^{NOTEZ}								
30110_110	Bands 33, 34, 35,				1	 		
$N_{oc}^{ m Note3}$	36, 37, 38, 39, 40						-119.5	-119.5
¹ ♥ oc	Band 42, 43	dBm/15 kHz	-80.8	-80.8	-104.7	-104.7	-118.5	-118.5
	Band 41, [44]					1	-117.5	-117.5
Es/lot		dB	-1.75	-1.75	-4.0	-3.2	-4.0	-3.2
	Bands 33, 34, 35,							
RSRP ^{Note4}	36, 37, 38, 39, 4	dBm/15 kU-	92 55	92 55	100 70	107.0	-123.50	-122.7
NORF	Band 42, 43	dBm/15 kHz	-82. 55	-82.55	-108.70	-107.9	-122.50	-121.7
	Band 41, [44]						-121.50	-120.7
	Bands 33, 34, 35,							
Note 4	36, 37, 38, 39, 40,]			
RSRQ ^{Note4}	42, 43	dB	-14.76	-14.76	-16.25	-15.69	-16.25	-15.69
Band 41, [44]								
	Bands 33, 34, 35,					1	00.00	00.00
Note4	36, 37, 38, 39, 40	ID /6 - " :	= -	= -			-90.26	-90.02
Io ^{Note4}	Band 42, 43	dBm/9 MHz	-50.8	-50.8	-75.46	-75.22	-89.26	-89.02
	Band 41, [44]]		-88.26	-88.02
\hat{E}_s/N_{oc}	_ , , , ,	dB	-1.75	-1.75	-4.0	-3.2	-4.0	-3.2

Propagat	ion condition	-	AWGN	AWGN	AWGN		
Note 1:	For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.						
Note 2:							
Note 3:	Interference from other ce	Ils and noise sour	ces not specified in th	ie test is assumed to	be constant over		
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.						
Note 4:	RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.						
Note 5:	RSRP and RSRQ minimur each receiver antenna port	•	e specified assuming	independent interfe	rence and noise at		

Table 9.2.4.2.5-3: RSRQ TDD - TDD inter frequency relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3
Nomal Conditions			•
Lowest reported value (Cell 2)	RSRQ_x-8	RSRQ_x-10	RSRQ_x-10
Highest reported value (Cell 2)	RSRQ_x+8	RSRQ_x+10	RSRQ_x+10
Extreme Conditions			•
Lowest reported value (Cell 2)	RSRQ_x-10	RSRQ_x-10	RSRQ_x-10
Highest reported value (Cell 2)	RSRQ_x+10	RSRQ_x+10	RSRQ_x + 10
RSRQ_x is the reported value of	Cell 1		

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.4A FDD - TDD Interfrequency RSRQ Accuracy

9.2.4A.1 FDD - TDD Inter Frequency Absolute RSRQ Accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.4A.1.1 Test purpose

To verify that the FDD - TDD inter frequency absolute RSRQ measurement accuracy is within the specified limit for all bands.

9.2.4A.1.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.4A.1.3 Minimum conformance requirements

The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell.

The accuracy requirements in table 9.2.4A.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

 $RSRP|d\,Bm\ according\ to\ Annex\ I.3.3\ for\ a\ corresponding\ Band.$

Table 9.2.4A.1.3-1: RSRQ FDD - TDD inter frequency absolute accuracy

Accı	ıracy		Conditions			
Normal	Normal Extreme		lo ^{note 1} range			
condition	condition	Ês/lot	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 2	-50	
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50	
			29 Note 4	-118	-50	
			25	-117.5	-50	
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.4A.1.3-2.

Table 9.2.4A.1.3-2: RSRQ FDD - TDD Inter frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.1 and A.9.2.4A.

9.2.4A.1.4 Test description

9.2.4A.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.4A.1.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is FDD cell and Cell 2 is TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.2.4A.1.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The absolute accuracy of RSRQ is defined as the RSRQ measured from a cell that has different carrier frequency from the serving cell, Cell 1.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.4A.1.5-1 and 9.2.4A.1.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. The SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. The UE shall transmit periodically Measurement Report messages.
- 6. The SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.4A.1.5-3.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to table G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.2.4A.1.5-1 and 9.2.4A.1.5-2 as appropriate.

9.2.4A.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.4A.1.4.3-1: Common Exception messages for RSRQ FDD - TDD inter frequency absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-2			
	Table H.3.5-4			

Table 9.2.4A.1.4.3-2: *MeasResults*: Additional RSRQ FDD - TDD inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5	Value/remark	Commont	Condition
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the	
		measurement id for	
		the reporting being	
		performed	
measResultPCell SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult		Set according to	
		specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.4A.1.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD - TDD inter frequency absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysCellId		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.4A.1.5 Test requirement

Table 9.2.4A.1.5-1 and 9.2.4A.1.5-2 define the primary level settings including test tolerances for all tests.

Each RSRQ FDD - TDD inter frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.4A.1.5-3.

Table 9.2.4A.1.5-1: Cell Specific Test requirement Parameters for RSRQ FDD - TDD inter frequency absolute accuracy (FDD Cell1)

Parameter	Unit Test 1		Test 2	Test 3
	Offic	Cell 1	Cell 1	Cell 1
E-UTRARF Channel Number		1	1	1
BW _{chamel}	MHz	10	10	10
Gap Pattern Id		0	0	0
Measurement bandwidth	n_{PRB}	22—27	22—27	22—27
PDSCH Reference measurement channel defined in A.1.1		R.0 FDD	R.0 FDD	R.0 FDD
PDSCH allocation	n_{PRB}	13—36	13—36	13—36
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.2.1		R.6 FDD	R.6 FDD	R.6 FDD
OCNG Patterns defined in D.1.1 (OP.1 FDD) and D.1.2 (OP.2 FDD)		OP.1 FDD	OP.1 FDD	OP.1 FDD
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB POSCH_RB	dB	0	0	0
$N_{oc}^{ m Note2}$	dBm/15 kHz	-80	-104.70	-114.5
$\mathbf{\hat{E}}_{_{\mathrm{s}}}/\mathrm{I}_{_{\mathrm{ot}}}$	dB	-1.75	-4.0	-4.0
RSRP ^{Note3}	dBm/15 kHz	-81.75	-108.70	-118.5
RSRQ ^{INOTE3}	dB	-14.76	-16.25	-16.25
lo ^{Note3}	dBm/9 MHz	-50	-75.46	-85.26
\hat{E}_s/N_{oc}	dB	-1.75	-4.0	-4.0
Propagation condition	-	AWGN	AWGN	AWGN
Note 1: OCNG shall be used suc			nd a constant total tra	ansmitted power

spectral density is achieved for all OFDM symbols.

Interference from other cells and noise sources not specified in the test is assumed to be constant over Note 2:

subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled. RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They

Note 3: are not settable parameters themselves.

RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at Note 4: each receiver antenna port.

Table 9.2.4A.1.5-2: Cell Specific Test requirement Parameters for RSRQ FDD - TDD inter frequency absolute accuracy (TDD cell2)

Parameter	Unit	Test 1	Test 2	Test 3
	Unit	Cell 2	Cell 2	Cell 2
E-UTRA RF Channel Number		2	2	2
BW _{chamel}	MHz	10	10	10
Gap Pattern Id		-	-	-
Special subframe configuration Note1		6	6	6
Uplink-dow nlink configuration Notes		1	1	1
Measurement bandw idth	n_{PRB}	22—27	22—27	22—27
PDSCH Reference measurement		-	_	_
channel defined in A.1.2				
PDSCH allocation	n_{PRB}	-	-	-
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.2.2		R.6 TDD	R.6 TDD	R.6 TDD
OCNG Patterns defined in D.2.1 (OP.1 TDD) and D.2.2 (OP.2 TDD)		OP.2 TDD	OP.2 TDD	OP.2 TDD
PBCH_RA				
PBCH_RB				
PSS_RA				
SSS_RA				
PCFICH_RB				
PHICH_RA				
PHICH_RB	dB	0	0	0
PDCCH_RA				
PDCCH_RB				
PDSCH_RA				
PDSCH_RB				
OCNG_RA ^{Note2}				
OCNG_RB ^{Note2}				
$N_{oc}^{ m Note3}$	dBm/15 kHz	-80.80	-104.70	-114.50
\hat{E}_{s}/I_{ot}	dB	-1.75	-3.20	-3.20
RSRP ^{NOTE4}	dBm/15 kHz	-82.55	-107.9	-117.70
RSRQ ^{Note4}	dB	-14.76	-15.69	-15.69
lo ^{Noie4}	dBm/9 MHz	-50.80	-75.22	-85.02
\hat{E}_s/N_{oc}	dB	-1.75	-3.20	-3.20
Propagation condition	-	AWGN	AWGN	AWGN
Nata di Fanana alala da forma a anal				:- 00DD TO

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

Note 4: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 5: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.2.4A.1.5-3: RSRQ FDD - TDD inter frequency absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3		
Normal Conditions					
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_00	RSRQ_00		
Highest reported value (Cell 2)	RSRQ_16	RSRQ_16	RSRQ_16		
Extreme Conditions					
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_00	RSRQ_00		
Highest reported value (Cell 2)	RSRQ_19	RSRQ_17	RSRQ_17		

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.4A.2 FDD - TDD Inter Frequency Relative Accuracy of RSRQ

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.2.4A.2.1 Test purpose

To verify that the FDD - TDD inter frequency relative accuracy measurement of RSRQ is within the specified limit for all bands.

9.2.4A.2.2 Test applicability

This test applies to all types of E-UTRA UE supporting FDD and TDD release 9 and forward. Applicability requires support for FGI bits 16 and 25.

9.2.4A.2.3 Minimum conformance requirements

The relative accuracy of RSRQ in inter frequency case is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency.

The accuracy requirements in table 9.2.4A.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.4 for a corresponding Band

$$\left| RSRP1 \right|_{dBm} - RSRP2 \right|_{dBm} \le [27]dB$$

| Channel 1_Io -Channel 2_Io | $\leq 20 \, dB$

Table 9.2.4A.2.3-1: RSRQ FDD - TDD inter frequency relative accuracy

Accı	uracy		Conditions				
Normal	Extreme	Es/lot Note	lo Note range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±3	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 5	-118	-50		
			25	-117.5	-50		
±4	±4	≥-6 dB	Note 4	Note 4	Note 4		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.4A.2.3-2.

Table 9.2.4A.2.3-2: RSRQ FDD - TDD Inter frequency relative accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.6.2 and A.9.2.4A.

9.2.4A.2.4 Test description

9.2.4A.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.4A.2.4.3.
- 4. Cell 1 and Cell 2 are on the different carrier frequencies. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is FDD cell and Cell 2 is TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.2.4A.2.4.2 Test procedure

The three tests consist of Cell 1, serving cell and Cell 2, target cell. The relative accuracy of RSRQ is defined as the RSRQ measured from one cell compared to the RSRQ measured from another cell on a different frequency.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.4A.2.5-1 and 9.2.4A.2.5-2 for the test interval as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. The SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ The \ UE \ shall \ transmit \ periodically \ Measurement Report \ messages.$
- 6. The SS shall check the RSRQ value of Cell 1 and Cell 2 in MeasurementReport messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each MeasurementReport message.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.2.4A.2.5-1 and 9.2.4A.2.5-2 as appropriate.

9.2.4A.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.4A.2.4.3-1: Common Exception messages for RSRQ FDD - TDD inter frequency relative accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-2			
·	Table H.3.5-4			

Table 9.2.4A.2.4.3-2: MeasResults: Additional RSRQ FDD - TDD inter frequency relative accuracy test requirement

Derivation Path: 36.331 clause 6.3.5 Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the measurement id for the reporting being performed	
measResultPCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m e as ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.4A.2.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD - TDD inter frequency relative accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

9.2.4A.2.5 Test requirement

Table 9.2.4A.2.5-1 and 9.2.4A.2.5-2 defines the primary level settings including test tolerances for all tests.

Each RSRQ FDD - TDD inter frequency relative accuracy test shall meet the reported values test requirements in Table 9.2.4A.2.5-3.

Table 9.2.4A.2.5-1: Cell Specific Test requirement Parameters for RSRQ FDD - TDD inter frequency relative accuracy (FDD Cell1)

Parameter	Unit	Test 1	Test 2	Test 3		
	Offic	Cell 1	Cell 1	Cell 1		
E-UTRARF Channel Number		1	1	1		
BW _{chamel}	MHz	10	10	10		
Gap Pattern Id		0	0	0		
Measurement bandwidth	n_{PRB}	22—27	22—27	22—27		
PDSCH Reference measurement channel defined in A.1.1		R.0 FDD	R.0 FDD	R.0 FDD		
PDSCH allocation	n_{PRB}	13—36	13—36	13—36		
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.2.1		R.6 FDD	R.6 FDD	R.6 FDD		
OCNG Patterns defined in D.1.1 (OP.1 FDD) and D.1.2 (OP.2 FDD)		OP.1 FDD	OP.1 FDD	OP.1 FDD		
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB Note1	dB dBm/15	0	0	0		
$N_{oc}^{ m Note2}$	dBm/15 kHz	-80.80	-104.70	-114.5		
$\hat{E}_{\scriptscriptstyle{\mathrm{s}}}/I_{\scriptscriptstyle{\mathrm{ot}}}$	dB	-1.75	-4.0	-4.0		
RSRP ^{Note3}	dBm/15 kHz	-82.55	-108.70	-118.5		
RSRQ ^{Note3}	dB	-14.76	-16.25	-16.25		
lo ^{Note3}	dBm/9 MHz	-50.80	-75.46	-85.26		
\hat{E}_s/N_{oc}	dB	-1.75	-4.0	-4.0		
Propagation condition	-	AWGN	AWGN	AWGN		
Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power						

spectral density is achieved for all OFDM symbols.

Interference from other cells and noise sources not specified in the test is assumed to be constant over Note 2:

subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled. RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They

Note 3: are not settable parameters themselves.

RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at Note 4: each receiver antenna port.

Table 9.2.4A.2.5-2: Cell Specific Test requirement Parameters for RSRQ FDD - TDD inter frequency relative accuracy (TDD cell2)

Parameter	Unit	Test 1	Test 2	Test 3
		Cell 2	Cell 2	Cell 2
E-UTRA RF Channel Number	N 41 1	2	2	2
BW _{charnel}	MHz	10	10	10
Gap Pattern Id		-	-	-
Special subframe configuration Note1		6	6	6
Uplink-dow nlink configuration Notes		1	1	1
Measurement bandwidth	n_{PRB}	22—27	22—27	22—27
PDSCH Reference measurement		-	-	-
channel defined in A.1.2				
PDSCH allocation	n_{PRB}	-	-	-
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.2.2		R.6 TDD	R.6 TDD	R.6 TDD
OCNG Patterns defined in D.2.1 (OP.1 TDD) and D.2.2 (OP.2 TDD)		OP.2 TDD	OP.2 TDD	OP.2 TDD
PBCH_RA				
PBCH_RB				
PSS_RA				
SSS_RA				
PCFICH_RB				
PHICH_RA		_	_	_
PHICH_RB	dB	0	0	0
PDCCH_RA PDCCH_RB				
PDSCH RA				
PDSCH_RB				
OCNG_RA ^{Note2}				
OCNG_RB ^{Note2}				
N_{oc}^{-} Note3	dBm/15 kHz	-80.80	-104.70	-114.50
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	-1.75	-3.20	-3.20
RSRP ^{NOTE4}	dBm/15 kHz	-82.55	-107.90	-117.70
RSRQ ^{NOTE4}	dB	-14.76	-15.69	-15.69
lo ^{rvote4}	dBm/9 MHz	-50.80	-75.22	-85.02
\hat{E}_s/N_{oc}	dB	-1.75	-3.20	-3.20
Propagation condition	-	AWGN	AWGN	AWGN
Note 1. For an agicle unifrom a and			blee 4.2.4 and 4.2.2	

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS

Note 2: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

Note 4: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 5: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.2.4A.2.5-3: RSRQ FDD-TDD inter frequency relative accuracy requirements for the reported values

	Test 1	Test 2	Test 3			
Nomal Conditions		•				
Lowest reported value (Cell 2)	RSRQ_ x-8	RSRQ_ x-10	RSRQ_ x-10			
Highest reported value (Cell 2)	RSRQ_ x+8	RSRQ_ x+10	RSRQ_ x+10			
Extreme Conditions		•				
Lowest reported value (Cell 2)	RSRQ_ x-10	RSRQ_ x-10	RSRQ_ x-10			
Highest reported value (Cell 2)	RSRQ_ x+10	RSRQ_ x+10	RSRQ_ x+10			
RSRQ_x is the reported value of Cell 1						

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.5 FDD RSRQ for E-UTRA Carrier Aggregation

9.2.5.1 FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation

9.2.5.1.1 Test purpose

To verify that FDD absolute RSRQ measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the FDD absolute RSRQ accuracy requirements of the primary component carrier and the secondary component carrier.

9.2.5.1.2 Test applicability

This test case applies to all types of E-UTRA UE release 10 and forward that support CA.

9.2.5.1.3 Minimum conformance requirements

The FDD RSRQ measurements of cells on the primary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1. The FDD RSRQ measurements of cells on the secondary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1.

The accuracy requirements in Table 9.2.5.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.1 for a corresponding Band.

Table 9.2.5.1.3-1: FDD RSRQ absolute accuracy for Carrier Aggregation

Accı	uracy		Conditions				
Normal	Extreme	Ês/lot	lo ^{Note 1} I	ange			
condition	condition	LS/IOI	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note ≥	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 4	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.5.1.3-2.

Table 9.2.5.1.3-2: FDD RSRQ absolute accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2, clause 9.1.5.1 and A.9.2.5.

9.2.5.1.4 Test description

9.2.5.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.5.1.4.3.
- 4. There are two E-UTRA FDD carriers with one cell on one E-UTRA FDD carrier and two cells on the other E-UTRA FDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.2.5.1.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The absolute accuracy of RSRQ is defined as the RSRQ measured from the primary component carrier (Cell 1) and the RSRQ measured from the secondary component carrier (Cell 2).

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.5.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.

- 9. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ values for Cell 1 and Cell 2 by the UE are compared to the actual RSRQ values according to Table 9.2.5.1.5-2. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. The SS shall check MeasurementReport messages transmitted by the UE until a test verdict has been achieved.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

9.2.5.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.5.1.4.3-1: Common Exception messages for FDD RSRQ absolute accuracy for Carrier Aggregation test requirement

Default Message Contents			
Common contents of system information blocks exceptions			
Default RRC messages and information elements contents exceptions	Table H.3.1-1 Table H.4.2-1 Table H.4.2-3 Table H.4.2-4		

9.2.5.1.5 Test requirement

Table 9.2.5.1.5-1 defines the primary level settings including test tolerances for all tests.

The FDD RSRQ absolute accuracy for carrier aggregation test shall meet the reported values test requirements in Table 9.2.5.1.5-2.

Table 9.2.5.1.5-1: Cell Specific Test requirement Parameters for FDD RSRQ absolute accuracy for Carrier Aggregation

	Test 1				
Parameters		Units	Cell 1 Cell 2		Cell 3
E-UTRARF Cha Number	nnel		1	2	2
BW _{channel_CA}		MHz	10	10	10
Time offset to Ce	ell 1	μs	-	0	3μs or 92*Ts
Time alignment of between cell 2 and			-	≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-
Measurement ba	ndwidth	n_{PRB}	22—27	22—27	22—27
PDSCH Referen measurement ch defined in A.1.1		This	R.0 FDD	R.0 FDD	-
PDSCH allocation	n	n_{PRB}	13—36	13—36	-
PDCCH/PCFICH Reference meas channel defined	urement in A.2.1		R.6 FDD	R.6 FDD	R.6 FDD
OCNG Patterns D.1.1 (OP.1 FDD D.1.2 (OP.2 FDD) and		OP.1 FDD	OP.1 FDD	OP.2 FDD
PBCH_RA PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB		dB	0	0	0
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24		-119.5	-11	16
	Band 9		-118.5	-11	
$N_{oc}^{$	Band 28 Bands 2, 5, 7, 26 Note 6 and 27	dBm/15 kHz	-118 -117.5	-114.5 -114	
	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7}		-116.5	-113	
	Band 25		-116	-112	2.5
$\hat{\mathbf{E}}_{\mathrm{s}}/\mathbf{I}_{\mathrm{ot}}$		dB	-4.0	-5.16	-5.54
RSRP ^{Note3}	Bands 1, 4, 6, 10, 11, 18 ,19, 21, 23 and 24	dBm/15 kHz	-123.5	-119.7	-120
	Band 9		-122.5	-118.7	-119

	Band 28		-122	-118.2	-118.5
	Bands 2,				
	5, 7, 26 Note 6 and		-121.5	-117.7	-118
	27 Bands 3,				
	8, 12,				
	13, 14, 17, 20,		-120.5	-116.7	-117
	22, and 29 ^{Note 7}				
	Band 25		-120	-116.2	-116.5
	Bands 1, 4, 6, 10, 11, 18 ,19, 21, 23 and 24				
	Band 9				-17.40
	Band 28				
RSRQ ^{Note3}	Bands 2,	dB	-16.25	-17.10 -17.4	
Tions.	5, 7, 26 Note 6 and				
	27 Bands 3,				
	8, 12,				
	13, 14,				
	17, 20, 22 and				
	29 ^{Note 7}				
	Band 25				
	Bands 1, 4, 6, 10,				
	11, 18		00.26	-85.61	
	,19, 21,		-90.26	-85.	.01
	23 and 24				
	Band 9		-89.26	-84.	.61
	Band 28		-88.76	-84.	
lo ^{Note3}	Bands 2,	dBm/9			
	5, 7, 26 Note 6 and	MHz	-88.26	-83.67	
	27				
	Bands 3,		-87.26		
	8, 12, 13, 14,			-82.61	
	17, 20,				
	22 and				
	29 ^{Note 7} Band 25		-86.76	-82.	.11
\hat{E}_s/N_{oc}	1 20 20	dB	-4.0	-3.7	-4.0
Propagation condit	ion	-		AWGN	

Propagation condition

NOTE 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

NOTE 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall

be modelled as AWGN of appropriate power for $^{N_{oc}}$ to be fulfilled.

NOTE 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

NOTE 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

NOTE 5: The selection of the bands for testing depends on the configuration

of the carrier aggregation supported by the UEs

NOTE 6: For Band 26, the tests shall be performed with the carrier frequency

of the assigned E-UTRA channel bandwidth within 865-894 MHz

NOTE 7: This band is used only for E-UTRA carrier aggregation with other E-

UTRA bands.

Table 9.2.5.1.5-2: FDD RSRQ absolute accuracy requirements for the reported values for Carrier Aggregation

	Test 1
	All bands
Nomal Conditions	
Lowest reported value (Cell 1)	RSRQ_00
Highest reported value Cell 1)	RSRQ_15
Lowest reported value (Cell 2)	RSRQ_00
Highest reported value (Cell 2)	RSRQ_14
Extreme Conditions	
Lowest reported value (Cell 1)	RSRQ_00
Highest reported value Cell 1)	RSRQ_16
Lowest reported value (Cell 2)	RSRQ_00
Highest reported value (Cell 2)	RSRQ_15

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.5.2 FDD Relative RSRQ Accuracy E-UTRA for Carrier Aggregation

9.2.5.2.1 Test purpose

To verify that FDD relative RSRQ measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the FDD relative RSRQ accuracy requirements between the primary and secondary component carriers.

9.2.5.2.2 Test applicability

This test case applies to all types of E-UTRA UE release 10 and forward that support CA.

9.2.5.2.3 Minimum conformance requirements

The FDD RSRQ measurements of cells on the primary component carrier are compared with measurements of cells on the secondary component carrier defined in TS 36.133 [4] clause 9.1.6.2. The applicable relative accuracy requirements are the RSRO inter-frequency accuracy requirements as defined in TS 36.133 [4] clause 9.1.6.2.

The accuracy requirements in Table 9.2.5.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP1,2_{dBm} according to Annex I.3.4 for a corresponding Band.

$$\left|RSRP1\right|_{dBm} - RSRP2\Big|_{dBm} \le [27]dB$$

|Channel 1_Io -Channel 2_Io | ≤ 20 dB

Table 9.2.5.2.3-1: FDD RSRQ relative accuracy for Carrier Aggregation

Accuracy		Conditions					
Normal	Extreme	Ës/lot Note	Ës/lot Note lo Note range				
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±3	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50		
			29 Note 5	-118	-50		
			25	-117.5	-50		
±4	±4	≥-6 dB	Note 4	Note 4	Note 4		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum Io of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.5.2.3-2.

Table 9.2.5.2.3-2: FDD RSRQ relative accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.3, clause 9.1.6.2 and A.9.2.5.

9.2.5.2.4 Test description

9.2.5.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.5.2.4.3.
- 4. There are two E-UTRA FDD carriers with one cell on one E-UTRA FDD carrier and two cells on the other E-UTRA FDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for

connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 s hall be powered OFF.

9.2.5.2.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The relative accuracy of RSRQ is defined as the RSRQ measured cells on the primary component carrier compared with measurements of cells on the secondary component carrier,

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.5.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.
- 9. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each MeasurementReport message according to Table 9.2.5.2.5-2.
- 10. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to table G.2.3-1 in Annex G.2 is achieved.

9.2.5.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.5.2.4.3-1: Common Exception messages for FDD RSRQ relative accuracy for Carrier Aggregation test requirement

Default Message Contents		
Common contents of system information		
blocks exceptions		
Default RRC messages and information	Table H.3.1-1	
elements contents exceptions	Table H.4.2-1	
	Table H.4.2-3	
	Table H.4.2-4	

9.2.5.2.5 Test requirement

Table 9.2.5.2.5-1 defines the primary level settings including test tolerances for all tests.

The FDD RSRQ relative accuracy for carrier aggregation test shall meet the reported values test requirements in Table 9.2.5.2.5-2.

Table 9.2.5.2.5-1: Cell Specific Test requirement Parameters for FDD RSRQ relative accuracy for Carrier Aggregation

Paramet	ers	Test 1				
1 41 411101010		Units	Cell 1	Cell 2	Cell 3	
E-UTRARF Cha Number	nnei		1	2	2	
BW _{channel_CA}		MHz	10	10	10	
Time offset to Ce	ell 1	μS	-	0	3μs or 92*Ts	
Time alignment error between cell 2 and cell 1			-	≤ Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-	
Measurement ba	ndwidth	n_{PRB}	22—27	22—27	22—27	
PDSCH Referen measurement ch defined in A.1.1		Thu	R.0 FDD	R.0 FDD	-	
PDSCH allocatio	n	n_{PRB}	13—36	13—36	-	
PDCCH/PCFICH Reference meas channel defined	urement in A.2.1		R.6 FDD	R.6 FDD	R.6 FDD	
OCNG Patterns D.1.1 (OP.1 FDD D.1.2 (OP.2 FDD) and		OP.1 FDD	OP.1 FDD	OP.2 FDD	
PBCH_RA PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RB OCNG_RA OCNG_RA		dB	0	0	0	
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24		-119.5	-116		
	Band 9		-118.5	-11		
$N_{oc}^{$	Band 28 Bands 2, 5, 7, 26 Note 6 and 27	dBm/15 kHz	-118 -117.5	-114.5 -114		
Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7}			-116.5	-113		
	Band 25		-116	-11:	2.5	
$\hat{ extbf{E}}_{ ext{s}}/ extbf{I}_{ ext{ot}}$		dB	-4.0	-5.16	-5.54	
RSRP ^{Note3}	Bands 1, 4, 6, 10, 11, 18 ,19, 21, 23 and 24	dBm/15 kHz	-123.5	-119.7	-120	
Band 9			-122.5	-118.7	-119	
Band 28			-122	-118.2	-118.5	

	Bands 2, 5, 7, 26 Note 6 and 27		-121.5	-117.7	-118
	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7}		-120.5	-116.7	-117
	Band 25		-120	-116.2	-116.5
	Bands 1, 4, 6, 10, 11, 18 ,19, 21, 23 and 24				
	Band 9				
	Band 28				
RSRQ ^{Note3}	Bands 2, 5, 7, 26 Note 6 and	dB	-16.25	-17.10	-17.40
	27				
	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7} Band 25				
	Bands 1, 4, 6, 10, 11, 18 ,19, 21, 23 and 24		-90.26	-85.	61
	Band 9		-89.26	-84.61	
	Band 28		-88.76	-84.	.11
lo ^{Note3}	Bands 2, 5, 7, 26 Note 6 and 27	dBm/9 MHz	-88.26	-83.	61
	Bands 3, 8, 12, 13, 14, 17, 20, 22 and 29 ^{Note 7}		-87.26	-82.	
	Band 25		-86.76	-82.	11
\hat{E}_s/N_{oc}		dB	-4.0	-3.7 AWGN	-4.0
Propagation condition		-	Ī	AVVGIV	

NOTE 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

NOTE 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall

be modelled as AWGN of appropriate power for $N_{\it oc}$ to be fulfilled.

NOTE 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

NOTE 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

NOTE 5: The selection of the bands for testing depends on the configuration of the carrier aggregation supported by the UEs

NOTE 6: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel bandwidth within 865-894 MHz

NOTE 7: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

Table 9.2.5.2.5-2: FDD RSRQ relative accuracy requirements for the reported values for Carrier Aggregation

	Test 1
	All bands
Normal Conditions	
Lowest reported value (Cell 2)	RSRQ_x - 12
Highest reported value (Cell 2)	RSRQ_x+9
Extreme Conditions	
Lowest reported value (Cell 2)	RSRQ_x - 12
Highest reported value (Cell 2)	RSRQ_x+9
RSRQ_x is the reported value of Cell 1	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.6 TDD RSRQ for E-UTRA Carrier Aggregation

9.2.6.1 TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation

9.2.6.1.1 Test purpose

To verify that TDD absolute RSRQ measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD absolute RSRQ accuracy requirements of the primary component carrier and the secondary component carrier.

9.2.6.1.2 Test applicability

This test case applies to all types of E-UTRA UE release 10 and forward that support CA.

9.2.6.1.3 Minimum conformance requirements

The TDD RSRQ measurements of cells on the primary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1. The TDD RSRQ measurements of cells on the secondary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1.

The accuracy requirements in Table 9.2.5.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.1 for a corresponding Band.

Accuracy		Conditions				
Normal	Extreme	Ês/lot	lo ^{Note 1} range			
condition	condition	LS/IO	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}	
	±4	±4 ≥-3 dB	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±2.5			2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 2	-50	
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50	
			29 Note 4	-118	-50	
			25	-117.5	-50	
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.6.1.3-2.

Table 9.2.6.1.3-2: TDD RSRQ absolute accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2, clause 9.1.5.1 and A.9.2.6.

9.2.6.1.4 Test description

9.2.6.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.6.1.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary

Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.2.6.1.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The absolute accuracy of RSRQ is defined as the RSRQ measured from the primary component carrier (Cell 1) and the RSRQ measured from the secondary component carrier (Cell 2) [and (Cell 3)].

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.6.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.
- 9. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ values for Cell 1 and Cell 2 by the UE are compared to the actual RSRQ values according to Table 9.2.6.1.5-2. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. The SS shall check MeasurementReport messages transmitted by the UE until a test verdict has been achieved.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

9.2.6.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.6.1.4.3-1: Common Exception messages for TDD RSRQ absolute accuracy for Carrier Aggregation test requirement

Default Message Contents		
Common contents of system information		
blocks exceptions		
Default RRC messages and information	Table H.3.1-1	
elements contents exceptions	Table H.4.2-1	
	Table H.4.2-3	
	Table H.4.2-4	

9.2.6.1.5 Test requirement

Table 9.2.6.1.5-1 defines the primary level settings including test tolerances for all tests.

The TDD RSRQ absolute accuracy for carrier aggregation test shall meet the reported values test requirements in Table 9.2.6.1.5-2.

Table 9.2.6.1.5-1: Cell Specific Test requirement Parameters for TDD RSRQ absolute accuracy for Carrier Aggregation

E-UTRARF Channel Number Bill Cell 1		Toold					
E-UTRA RF Channel Number BWatsarnel Timing offset to cell1 µS - 0 3µs or 92°Ts A Time alignment error between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Special subframe configuration number Results and configuration number PDSCH Reference measurement channel defined in A1.2 PDSCH Reference measurement channel defined in A2.2 COKIPC FICH/PHICH Reference measurement channel defined in D2.1 (OP.1 TDD) and D.2.2 (OP.2 TDD) PBCH_RA PDCCH/RC RB PSS_RA SSS_RA SSS_RA PCPICH_RB PDSCH RA PDSCH RB PDSCH RA PDSCH RB PDSCH RA PDSCH RA PDSCH RB PDCCH_RB PDSCH RA PDSCH RB PDCCH_RB PDSCH RA PDSCH RB PDCCH_RB PDCCH_RB PDCCH_RB PDSCH RA PDSCH RB PDCCH_RB PDSCH RA PDSCH RB PDCCH_RB PDSCH RA PDSCH RB RSR Na SSS_RA PCPICH_RB PHICH_RB DDCCH_RB PDSCH_RB PDSCH_	Para	ameter	Unit	Cell 1	Test 1	Cell 3	
BWchannel	F-UTRARE Char	nel Number					
Timing offset to cell1 μs - 0 3μs or 92*Ts		inor realization	MHz				
Time alignment error between cell 2 and cell 1 S Time alignment terror as specified in 3GPP and cell 1 Time alignment terror as specified in 3GPP and cell 1 Time alignment terror as specified in 3GPP and cell 1 Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and cell 2g of clause configuration Time alignment terror as specified in 3GPP and clause configuration Time alignment terror as specified in 3GPP and clause configuration Time alignment terror as separation Time alignment terror as separation Time alignment terror as separation Time alignment T		-114				3us or	
Time alignment error between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Time alignment terror between cell 2 and cell 1 Time alignment error between cell 2 and cell 1 Time alignment terror as specified in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error between cell 2 in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment error alignment error alignment in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment terror alignment error alignment in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment terror alignment error alignment in 3GPP TS 36.104 [29] clause 6.5.3.1. Time alignment terror alignment error	Timing offset to ce	ell'1 	μS	-	-		
Time alignment error between cell 2 and cell 1 Specified in 3GPP TS 36.104 [29] clause 6.5.3.1.							
Time alignment error between cell 2 and cell 1 Section Secti							
Special subframe configuration Special subframe configuration							
Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe configuration Special subframe Special subfra		rror between cell 2		_		_	
Cause Caus	and cell 1						
Clause							
Special subframe configuration Number 1							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Special subframe	configuration Notes					
PDSCH Reference measurement channel defined in A1.2 R.0 TDD R.0 TDD - TDD TDD R.6 TDD R.6 TDD R.6 TDD R.6 TDD TDD R.6 TDD TD	Uplink-downlink o	configuration Notes			1		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Measurement bar	ndwidth	n_{PRB}		22—27		
$\begin{array}{c} \text{Channel defined in A.1.2} \\ \text{PDSCH allocation} \\ \text{PDCCH/PCFICH/PHICH Reference} \\ \text{measurement channel defined in A.2.2} \\ \text{CONG Patterns defined in D.2.1} \\ \text{(OP.1 TDD) and D.2.2 (OP.2 TDD)} \\ \text{PBCH_RA} \\ \text{PBCH_RA} \\ \text{PBCH_RA} \\ \text{PSS_RA} \\ \text{SSS_RA} \\ \text{SSS_RA} \\ \text{PCFICH_RB} \\ \text{PHICH_RA} \\ \text{PHICH_RA} \\ \text{PDCCH_RB} \\ \text{PDCCH_RB} \\ \text{PDCCH_RB} \\ \text{PDCCH_RB} \\ \text{PDSCH_RA} \\ \text{PDSCH_RA} \\ \text{PDSCH_RA} \\ \text{PDSCH_RA} \\ \text{PDSCH_RB} \\ \text{OCNG_RA}^{\text{Note2}} \\ \text{OCNG_RA}^{\text{Note2}} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 42, 43} \\ \text{Band 41, [44]} \\ \text{Band 42, 43} \\ B$					R.0 TDD	-	
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.2.2							
R.6 TDD			n_{PRB}	13—36	13—36	-	
A 2.2 OCNG Patterns defined in D.2.1 (OP.1 TDD) and D.2.2 (OP.2 TDD) PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RB POSCH_RA PDSCH_RB CONG_RA ^{NOMEZ} OCNG_RB POCNG_RB POCNG_RA Band 42, 43 Band 41, [44] E Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] RSRP Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, [44] Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands				R.6	D C TOD	R.6	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		annei deiined in		TDD	טטו א.א	TDD	
(OP.1 TDD) and D.2.2 (OP.2 TDD) TDD TDD TDD PBCH_RA PBCH_RB PSS_RA PSS_RA PSS_RA PSS_RA POFICH_RB PHICH_RA PHICH_RA PHICH_RB O		lefined in D 2 1		OP 1	OP 1	OP 2	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					_		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		(- /					
SSS_RA	PBCH_RB						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			- 40	0			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			aB 0	U	U	U	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	_						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			-				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	OCNG_RA ^{Note2}		-				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	OCNG_RB ^{NOTEZ}						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	N Nove			-119.5	-116		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	oc Notes		dBm/15 kHz	-118.5	-115		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			-				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ê,/I,		dB	-4.0	-5.16	-5.54	
RSRP ^{Note4} $ \begin{array}{c} 36, 37, 38, 39, 40 \\ \hline Band 42, 43 \\ \hline Band 41, [44] \\ \hline \\ RSRQ^{Note4} \\ \hline \\ Io^{Note4} \\ \hline \\ \hline \\ \hline \\ \hline \\ E_s/N_{oc} \\ \hline \end{array} \begin{array}{c} 36, 37, 38, 39, 40 \\ \hline Band 42, 43 \\ \hline \\ Bands 33, 34, 35, \\ 36, 37, 38, 39, 40 \\ \hline \\ Bands 33, 34, 35, \\ 36, 37, 38, 39, 40 \\ \hline \\ Band 41, 42, 43 \\ \hline \\ Band 42, 43 \\ \hline \\ Band 41, [44] \\ \hline \end{array} \right] \\ dBm/9 \ MHz \\ \hline \begin{array}{c} -123.50 \\ -119.7 \\ -120.50 \\ -118.7 \\ -119$	57 01	Bands 33, 34, 35.		100.50	1407	100	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	RSRP ^{Note4}	36, 37, 38, 39, 40	dBm/15 kHz				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	I CONT		GDIII/ IO KI IZ				
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				-121.50	-117.7	-118	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	DCDONote4		40	16.05	17.40	17.40	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	NOKU		u D	-16.25	-17.10	-17.40	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				00.00	0.5	24	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Note4	36, 37, 38, 39, 40	dBm/9 MHz	-90.26	-85.6	01	
\hat{E}_s/N_{oc} dB -4.0 -3.70 -4.0							
		Band 41, [44]		-88.26	-83.6	31	
Propagation condition - AWGN	\hat{E}_s/N_{oc}		dB	-4.0	-3.70	-4.0	
	Propagation cond	lition	-		AWGN	1	

NOTE 1:	For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.
NOTE 2:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM
	symbols.
NOTE 3:	Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled
	N
	as AWGN of appropriate power for N_{oc} to be fulfilled.
NOTE 4:	RSRQ, RSRP and lo levels have been derived from other parameters for
	information purposes. They are not settable parameters themselves.
NOTE 5:	RSRP and RSRQ minimum requirements are specified assuming
	independent interference and noise at each receiver antenna port.
NOTE 6:	The selection of the bands for testing depends on the configuration of the
	carrier aggregations supported by the UEs.

Table 9.2.6.1.5-2: TDD RSRQ absolute accuracy requirements for the reported values for Carrier Aggregation

	Test 1
	All bands
Nomal Conditions	·
Lowest reported value (Cell 1)	RSRQ_00
Highest reported value Cell 1)	RSRQ_15
Lowest reported value (Cell 2)	RSRQ_00
Highest reported value Cell 2)	RSRQ_14
Extreme Conditions	·
Lowest reported value (Cell 1)	RSRQ_00
Highest reported value Cell 1)	RSRQ_16
Lowest reported value (Cell 2)	RSRQ_00
Highest reported value Cell 2)	RSRQ_15

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.6.2 TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation

9.2.6.2.1 Test purpose

To verify that TDD relative RSRQ measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions. This test will verify the TDD relative RSRQ accuracy requirements between the primary and secondary component carriers.

9.2.6.2.2 Test applicability

This test case applies to all types of E-UTRA UE release 10 and forward that support CA.

9.2.6.2.3 Minimum conformance requirements

The TDD RSRQ measurements of cells on the primary component carrier are compared with measurements of cells on the secondary component carrier defined in TS 36.133 [4] clause 9.1.6.2. The applicable relative accuracy requirements are the RSRQ inter-frequency accuracy requirements as defined in TS 36.133 [4] clause 9.1.6.2.

The accuracy requirements in Table 9.2.6.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

 $RSRP1,2|_{dBm}$ according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \right|_{dBm} \le [27]dB$$

|Channel 1_Io -Channel 2_Io | \leq 20 dB

Table 9.2.6.2.3-1: TDD RSRQ relative accuracy for Carrier Aggregation

Accı	Accuracy		Conditions					
Normal	Extreme	Ës/lot Note	lo ^{Note 1} range			lo ^{Note 1} range		
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo			
dB	dB	dB		dBm/15kHz	dBm/BW _{Channel}			
		1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50				
			9, 42, 43	-120	-50			
			28	-119.5	-50			
±3	±4	≥-3 dB	2, 5, 7, 27, 41, [44]	-119	-50			
			26	-118.5 Note 3	-50			
			3, 8, 12, 13, 14, 17, 20, 22	-118	-50			
			29 Note 5	-118	-50			
			25	-117.5	-50			
±4	±4	≥-6 dB	Note 4	Note 4	Note 4			

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Es/lot is the minimum Es/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.6.2.3-2.

Table 9.2.6.2.3-2: TDD RSRQ relative accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.3, clause 9.1.6.2 and A.9.2.6.

9.2.6.2.4 Test description

9.2.6.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.6.2.4.3.

4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.2.6.2.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The relative accuracy of RSRQ is defined as the RSRQ measured cells on the primary component carrier compared with measurements of cells on the secondary component carrier,

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.6.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically MeasurementReport messages.
- 9. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each MeasurementReport message according to Table 9.2.6.2.5-2.
- 10. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to table G.2.3-1 in Annex G.2 is achieved.

9.2.6.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.6.2.4.3-1: Common Exception messages for TDD RSRQ relative accuracy for Carrier Aggregation test requirement

Default Message Contents			
Common contents of system information			
blocks exceptions			
Default RRC messages and information	Table H.3.1-1		
elements contents exceptions	Table H.4.2-1		
•	Table H.4.2-3		
	Table H.4.2-4		

9.2.6.2.5 Test requirement

Table 9.2.6.2.5-1 defines the primary level settings including test tolerances for all tests.

The TDD RSRQ relative accuracy for carrier aggregation test shall meet the reported values test requirements in Table 9.2.5.2.5-2.

Table 9.2.6.2.5-1: Cell Specific Test requirement Parameters for TDD RSRQ relative accuracy for Carrier Aggregation

		1	ı			
Para	ameter	Unit	Cell 1	Test 1 Cell 2	Cell 3	
E-UTRARF Char	nel Number		1	2	2	
BW _{channel}	mor rearribor	MHz	'	10		
Timin a affect to a	-114			_	3μs or	
Timing offset to c	ell1	μS	-	0	92*Ts	
and cell 1	error between cell 2		-	≤ Time alignme nt error as specified in 3GPP TS 36.104 [29] clause 6.5.3.1.	-	
Special subframe				6		
Uplink-downlink				1		
Measurement ba	ndwidth	n_{PRB}		22—27		
PDSCH Reference			R.0	R.0 TDD		
channel defined i	n A.1.2		TDD	לטון ט.א	-	
PDSCH allocation	n	n_{PRB}	13—36	13—36	-	
PDCCH/PCFICH	/PHICH Reference	770	D.C		D.C	
measurement cha	annel defined in		R.6 TDD	R.6 TDD	R.6 TDD	
A.2.2 OCNG Patterns of	defined in D 2.1		OP.1	OP.1	OP.2	
	D.2.2 (OP.2 TDD)		TDD	TDD	TDD	
PBCH_RA	D.2.2 (OI .2 1DD)		100	100	100	
PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RB PDSCH_RA PDSCH_RA PDSCH_RA OCNG_RA OCNG_RB OCNG_RB		dB	0	0	0	
$N_{ac \text{Note3}}$	Bands 33, 34, 35, 36, 37, 38, 39, 40		-119.5	-11	16	
OC NOIGO	Band 42, 43	dBm/15 kHz	-118.5	-11	15	
	Band 41, [44]		-117.5	-11	4	
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$		dB	-4.0	-5.16	-5.54	
RSRP ^{Note4}	Bands 33, 34, 35, 36, 37, 38, 39, 40	- dBm/15 kHz	-123.50	-119.7	-120	
T.C.T.	Band 42, 43 Band 41, [44]	dBiii, io ki iz	-122.50 -121.5	-118.7 -117.7	-119 -118	
RSRQ ^{Note4} Bands 33, 34, 35, 36, 37, 38, 39, 40 Band 41, 42, 43		dB	-16.25	-17.10	-17.40	
Noted	Bands 33, 34, 35, 36, 37, 38, 39, 40		-90.26	-85.	61	
lo ^{Note4} 36, 37, 38, 39, 40 Band 42, 43		dBm/9 MHz	-89.26	-84.	61	
	Band 41, [44]	-	-88.26	-83.		
\hat{E}_s/N_{oc}	Pana +1, [++]	dB	-4.0	-3.7	-4.0	
Propagation cond	dition	-		AWGN		
		l olink-downlink o	u onfiguratio		les 4.2-1	
NOTE 1: For special subframe and uplink-downlink configurations see Tables 4.2-1						

	and 4.2-2 in 3GPP TS 36.211.
NOTE 2:	OCNG shall be used such that both cells are fully allocated and a
	constant total transmitted power spectral density is achieved for all OFDM
	symbols.
NOTE 3:	Interference from other cells and noise sources not specified in the test is
	assumed to be constant over subcarriers and time and shall be modelled
	N
	as AWGN of appropriate power for N_{oc} to be fulfilled.
NOTE 4:	RSRQ, RSRP and lo levels have been derived from other parameters for
	information purposes. They are not settable parameters themselves.
NOTE 5:	RSRP and RSRQ minimum requirements are specified assuming
	independent interference and noise at each receiver antenna port.
NOTE 6:	The selection of the bands for testing depends on the configuration of the
	carrier aggregations supported by the UEs.

Table 9.2.6.2.5-2: TDD RSRQ relative accuracy requirements for the reported values for Carrier Aggregation

	Test 1
	All bands
Nomal Conditions	
Lowest reported value (Cell 2)	RSRQ_x-12
Highest reported value (Cell 2)	RSRQ_x+9
Extreme Conditions	•
Lowest reported value (Cell 2)	RSRQ_x-12
Highest reported value (Cell 2)	RSRQ_x+9
RSRQ_x is the reported value of Cell 1	

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.7 FDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with Non-MBSFN ABS

9.2.7.1 FDD RSRQ under Time Domain Measurement Resource Restriction with Non-MBSFN ABS

9.2.7.1.1 Test purpose

The purpose of this test is to verify that the RSRQ measurement accuracy under time domain measurement resource restriction is within the specified limits for all bands.

9.2.7.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward. Applicability requires support for FGI bit 115.

9.2.7.1.3 Minimum conformance requirements

The requirements for absolute accuracy of RSRQ in this section shall apply to a cell on the same frequency as that of the serving cell when a time domain measurement resource restriction pattern for performing RSRQ measurements of this cell is configured by higher layers according to TS 36.331 [5].

The accuracy requirements in Table 9.2.7.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled,

RSRP|dBm according to Annex I.3.9 for a corresponding Band,

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRQ measurement,

The RSRQ measurement is not performed in any subframe other than those indicated by the time domain measurement resource restriction pattern configured for the measured cell,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.2.7.1.3-1: RSRQ Intra frequency absolute accuracy under time domain measurement resource restriction

Accı	Accuracy		Conditions			
Normal Extreme		Ês/lot	lo ^{note z} range			
condition	condition	LS/IOI	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/ 15kHz Note 1, 6	dBm/BW _{Channel}	
		±4 ≥-2 dB	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
	.		28	-119.5	-50	
±2.5	±4		2, 5, 7, 27, 41, [44]	-119	-50	
			26	-118.5 Note 3	-50	
		3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	-50		
			25	-117.5	-50	
±3.5	±4	≥-4 dB	Note 4	Note 4	Note 4	

- NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.
- NOTE 2: lo is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRQ measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.
- NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.
- NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.
- NOTE 6: The condition level is increased by Δ>0, when applicable, as described in TS 36.133 [4] sections B.4.2 and B.4.3.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.7.1.3-2.

Table 9.2.7.1.3-2: RSRQ FDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clauses 9.1.5.2 and A.9.2.7.

9.2.7.1.4 Test description

9.2.7.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.2.7.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.2.7.1.4.3.
- 5. There is one E-UTRA FDD carrier and two cells specified in each test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 9.2.7.1.4.1-1: General test parameters for E-UTRAN FDD RSRQ intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
			3μs or 92*Ts
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are selected randomly so that the condition is met.
ABS pattern		(100000010000001000 00001000000010000000)	Non-MBSFN ABS. FDD ABS Pattern Info IE, as defined in TS 36.423 [28], clause 9.2.54. Configured in Cell 1. The first/leftmost bit corresponds to the subframe #0 of a radio frame satisfying SFN mod 40 = 0. No MBSFN subframes are configured in the ABS subframes in Cell 1.
Time-domain measurement resource restriction pattern for neighbour cell measurements on RF Channel 1		(100000010000001000	Configured for Cell 2 measurements by meas SubframePattern-Neigh IE in meas SubframePatternConfig-Neigh, as defined in TS 36.331 [5], clause 6.3.5. meas SubframeCellList contains Cell 2.
Time-domain measurement resource restriction pattern for serving cell measurements		'0100000001000000100 00000100000001000000	Configured for measurements on Cell 1.

9.2.7.1.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The absolute accuracy of RSRQ intra frequency measurements under time do main measurement resource restriction is tested by using the parameters in Table 9.2.7.1.4.1-1 and Table 9.2.7.1.5-1 for non-MBSFN ABS with non-colliding CRS. In all test cases, Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 2 is the target cell to be measured for RSRQ.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN FDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.7.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.

- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.7.1.5-2.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.2.7.1.5-1 as appropriate.

9.2.7.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.2.7.1.4.3-1: Common Exception messages for RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Default Message Contents				
Common contents of system information blocks exceptions				
Default RRC messages and information elements contents exceptions	Table H.3.1-1 Table H.3.5-1 Table H.3.5-4			

Table 9.2.7.1.4.3-2: *MeasResults*: Additional RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1	Identifies the	
		measurement id for	
		the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to	
		specific test	
rsrqResult		Set according to	
		specific test	
}			
measResultNeighCells CHOICE {			
meas ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.7.1.4.3-3: MeasResultListEUTRA: Additional RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to specific test	
}			
}			

Table 9.2.7.1.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3	3-16 RadioResourceConfigDo	edicated-SRB2-DRI	B(n,m)
Information Element	Value/remark	Comment	Condition
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=			
SEQUENCE {			
MeasSubframePatternPCell-r10 CHOICE {			
setup SEQUENCE {			
subframePatternFDD-r10	'010000001000000100	BIT STRING	
	0000010000001000000	(SIZE (40))	
}			
}			
}			

Table 9.2.7.1.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6	6-2 MeasObjectEUTRA-GEN	ERIC	
Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
measSubframePatternConfigNeigh-r10 CHOICE {			
setup SEQUENCE {			
measSubframePatternNeigh-r10 CHOICE {			
subframePatternFDD-r10	'100000010000001000	BIT STRING	
	00001000000010000000	(SIZE (40))	
}			
measSubframeCellList-r10 SEQUENCE {			
start	Physical Cell ID of Cell 2		
range	Not present		
}			
}			
}			
}			

9.2.7.1.5 Test requirement

Table 9.2.7.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRQ FDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.7.1.5-2.

Table 9.2.7.1.5-1: Cell Specific Test requirement Parameters for E-UTRAN FDD RSRQ intra frequency test parameters under time domain measurement resource restriction with non-MBSFN ABS

De		l ledt	Tes	st 1	Tes	st 2	Tes	st 3	
	rameter	Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2	
E-UTRARF Ch	nannel Number	NALL-	1				1		
BW _{channel}		MHz		0	10		10		
Measurement I		$n_{\it PRB}$		–27	22—27			22—27	
PDSCH Reference channel define	ence measurement d in A.1.1		R.0 FDD	-	R.0 FDD	-	R.0 FDD	-	
PDSCH alloca	tion	n_{PRB}	13—36	-	13—36	-	13—36	-	
PDCCH/PCFIC	CH/PHICH asurement channel	TAD	R.6	EDD	D.6	FDD	R.61		
defined in A.3.1	1.2.1		14.0	100	14.0	100	17.01	00	
OCNG Pattern: (OP.5 FDD) an FDD)	s defined in D.1.5 d D.1.6 (OP.6		OP.5 FDD	OP.6 FDD	OP.5 FDD	OP.6 FDD	OP.5 FDD	OP.6 FDD	
PBCH_RA									
PBCH_RB									
PSS_RA									
	SSS_RA PCFICH_RB								
PHICH_RA									
PHICH_RB		dB	Note 6	0	Note 6	0	Note 6	0	
PDCCH_RA		u.b	110100		110100	· ·	110100	U	
PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG_RAINOTE									
OCNG_RB ^{Note1}									
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-1		
	Bands 9						-115 -114.5		
$N_{_{oc}}^{^{Note2}}$	Band 28 Bands 2, 5, 7, 26							4.5	
TV _{oc}	Note 7 and 27	dBm/15 kHz	-85	5.76	-10:	3.85	-1	14	
	Bands 3, 8, 12, 13, 14, 17, 20						-1	13	
	and 22 Band 25						-11	2.5	
CRS \hat{E}_s/N_{oc}	•	dB	5	-1.2	5	-1.2	5	-3.2	
CRS (\hat{E}_s/I_{ot})		dB	2.55	-1.20	2.55	-1.20	3.30	-3.20	
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23and 24						-111	-119.2	
	Bands 9 Band 28						-100 -109.5	-118.2 -117.7	
RSRP ^{Note3,4,5}	Bands 2 5 7 26	dBm/15 kHz	-80.7	-86.96	-98.85	-105.05	-109.5	-117.7	
	Note 7 and 27 Bands 3, 8, 12,								
	13, 14, 17, 20 and 22						-108	-116.2	
	Band 25						-107.5	-115.7	
(RSRQ) _{meas}	Bands 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28	dB	-12.71	-14.80	-12.71	-14.80	-12.46	-16.11	

	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-81.55	-85.20
	Bands 9						-80.55	-84.20
() 11.0	Band 28						-80.05	-83.70
$(Io)_{meas}^{Note3}$	Bands 2, 5, 7, 26 Note 7 and 27	dBm/9 MHz	-51.06	-54.39	-69.15	-72.48	-79.55	-83.20
	Bands 3, 8, 12, 13, 14, 17, 20 and 22						-78.55	-82.20
	Band 15						-78.05	-81.70
Propagation co	ndition	-	AW	GN	AW	GN	AW	GN

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.

Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.

Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Note 5: Applies to restricted measurement subframes of the respective cell.

Note 6: Non-ABS and ABS subframe channel powers defined in Table C.3.1.1.1-1

Note 7: For Band 26, the tests shall be performed with the carrier frequency of the assigned E-UTRA channel

bandwidth within 865-894 MHz.

Table 9.2.7.1.5-2: RSRQ FDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
	All bands	All bands	All bands
	Nomal Condition	ons	•
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_04	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_16	RSRQ_15
	Extreme Condit	ions	
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_01	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_19	RSRQ_16

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.8 TDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with Non-MBSFN ABS

9.2.8.1 TDD RSRQ under Time Domain Measurement Resource Restriction with Non-MBSFN ABS

9.2.8.1.1 Test purpose

The purpose of this test is to verify that the RSRQ measurement accuracy under time domain measurement resource restriction is within the specified limits for all bands.

9.2.8.1.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward. Applicability requires support for FGI bit 115.

Relea	se 11 Acci	uracy		1168 Conditions 3GPP TS 36.521-3 V11.2.0 (2013-09					
	Normal	Extreme	Ês/lot	lo ^{Note 2} range					
	condition	condition	LS/IOt	E-UTRA operating bands	Minimum Io	Maximum lo			
	dB	dB	dB		dBm/ 15kHz Note 1,	dBm/BW _{Channel}			
				1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50			
				9, 42, 43	-120	-50			
			. 6 15	28	-119.5	-50			
	±2.5	±4	≥-2 dB	2, 5, 7, 27, 41, [44]	-119	-50			
				26	-118.5 Note 3	-50			
				3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	-50			
				25	-117.5	-50			
	±3.5	±4	≥-4 dB	Note 4	Note 4	Note 4			
	NOTE 1:	This minimum	lo condition is	expressed as the average lo per RE over	er all REs in tha	tsymbol.			
	NOTE 2: I	o is defined in	subframes in	dicated by the time domain measuremer	nt resource restr	iction pattern			
				erforming RSRQ measurements of this cell. The lo range defined by the minimum					
	a	and the maxim	um lo levels a	Is applies to CRS and non-CRS symbols. Io may be different in different					
	5	symbols within	a subframe.						
	NOTE 3:	The condition I	nas the minim	um lo of -119 dBm/15kHz when the carri	ier frequency of	the assigned E-			

UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands NOTE 5:

NOTE 6: The condition level is increased by Δ>0, when applicable, as described in TS 36.133 [4] sections

B.4.2 and B.4.3.

9.2.8.1.3 Minimum conformance requirements

The requirements for absolute accuracy of RSRQ in this section shall apply to a cell on the same frequency as that of the serving cell when a time domain measurement resource restriction pattern for performing RSRQ measurements of this cell is configured by higher layers according to TS 36.331 [5].

The accuracy requirements in Table 9.2.8.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled,

RSRP_{dBm} according to Annex I.3.9 for a corresponding Band,

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRQ measurement,

The RSRQ measurement is not performed in any subframe other than those indicated by the time domain measurement resource restriction pattern configured for the measured cell,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.2.8.1.3-1: RSRQ Intra frequency absolute accuracy under time domain measurement resource restriction

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.8.1.3-2.

Table 9.2.8.1.3-2: RSRQ TDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clauses 9.1.5.2 and A.9.2.8.

9.2.8.1.4 Test description

9.2.8.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.20.
- 2. The general test parameter settings are set up according to Table 9.2.8.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.2.8.1.4.3.
- 5. There is one E-UTRA TDD carrier and two cells specified in each test. Cell 1 is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test.

Table 9.2.8.1.4.1-1: General test parameters for E-UTRAN TDD RSRQ intra frequency test parameters under time-domain measurement resource restriction with non-MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	Also the aggressor cell.
Neighbour cell		Cell 2	Cell to be measured
PCell ABS configuration		Non-MBSFN ABS	As defined in Table C.3.1.1.1-1
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe
			configurations see Table 4.2-1 in [9].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [9].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
			3μs or 92*Ts
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are randomly
		!=0	selected so that the condition is met
ABS pattern		'000000001000000001'	Non-MBSFN ABS. TDD ABS Pattern Info IE, as
			defined in TS 36.423 [28], clause 9.2.54.
			Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 20 = 0. No MBSFN subframes are
			configured in the ABS subframes in Cell 1.
Time-domain measurement		'000000001000000001'	Configured for Cell 2 measurements by
resource restriction pattern for			meas Subframe Pattern-Neigh IE in
neighbour cell measurements on			meas Subframe Pattern Config-Neigh, as defined
RF Channel 1			in TS 36.331 [5], clause 6.3.5.
Time a demonit of the second o		(40000000000000000000000000000000000000	meas Subframe CellList contains Cell 2.
Time-domain measurement		'100000000100000000'	Configured for Cell 1 measurements.
resource restriction pattern for			
serving cell measurements			

9.2.8.1.4.2 Test procedure

In this test case all cells are on the same carrier frequency. The absolute accuracy of RSRQ intra frequency measurements under time domain measurement resource restriction is tested by using the parameters in Table 9.2.8.1.4.1-1 and Table 9.2.8.1.5-1 for non-MBSFN ABS with non-colliding CRS. In all test cases, Cell 1 is the serving cell and also the aggressor cell to Cell 2. Cell 2 is the target cell to be measured for RSRQ.

The UE is configured by higher layers via Cell 1 with a time-domain measurement resource restriction pattern for performing E-UTRAN TDD intra-frequency measurements on neighbour cells and provided with a neighbour cell list associated with the pattern, where the cell list includes Cell 2. The UE is also configured with a time-domain measurement resource restriction pattern for the serving cell measurements. The information for both patterns shall be provided to the UE before the measurements start.

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.2.8.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the RSRQ value in MeasurementReport messages. The RSRQ value of Cell 2 reported by the UE is compared to the actual RSRQ value according to Table 9.2.8.1.5-2.
- 7. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to G.2.3-1 in Annex G.2 is achieved.

8. Repeat step 1-7 for each sub-test in Table 9.2.8.1.5-1 as appropriate.

9.2.8.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.2.8.1.4.3-1: Common Exception messages for RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.5-1			
·	Table H.3.5-4			

Table 9.2.8.1.4.3-2: *MeasResults*: Additional RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.331 [5] clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult		Set according to specific test	
rsrqResult		Set according to specific test	
}			
measResultNeighCells CHOICE {			
m e as ResultListEUTRA	MeasResultListEUTRA		
}			
}			

Table 9.2.8.1.4.3-3: MeasResultListEUTRA: Additional RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListEUTRA::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId	PhysicalCellIdentity		
measResult SEQUENCE {			
rsrpResult	Not present		
rsrqResult		Set according to	
		specific test	
}			
}			

Table 9.2.8.1.4.3-4: RadioResourceConfigDedicated-SRB2-DRB(n,m): Additional RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-16 RadioResourceConfigDedicated-SRB2-DRB(n,m)						
Information Element	Value/remark	Comment	Condition			
RadioResourceConfigDedicated-SRB2-DRB(n, m) ::=						
SEQUENCE {						
MeasSubframePatternPCell-r10 CHOICE {						
setup SEQUENCE {						
subframePatternTDD-r10 CHOICE {						
subframeConfig1-5-r10	'100000000100000000'	BIT STRING				
		(SIZE (20))				
}						
}						
}						
}						

Table 9.2.8.1.4.3-5: MeasObjectEUTRA-GENERIC(Freq): Additional RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-2 MeasObjectEUTRA-GENERIC						
Information Element	Value/remark	Comment	Condition			
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE						
{						
measSubframePatternConfigNeigh-r10 CHOICE {						
setup SEQUENCE {						
measSubframePatternNeigh-r10 CHOICE {						
subframePatternTDD-r10 CHOICE {						
subframeConfig1-5-r10	'000000001000000001'	BIT STRING				
		(SIZE (20))				
}						
}						
measSubframeCellList-r10 SEQUENCE {						
start	Physical Cell ID of Cell 2					
range	Not present					
}						
}						
}						
}						

9.2.8.1.5 Test requirement

Table 9.2.8.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRQ TDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.8.1.5-2.

Table 9.2.8.1.5-1: Cell Specific Test requirement Parameters for E-UTRAN TDD RSRQ intra frequency test parameters under time domain measurement resource restriction with non-MBSFN ABS

Parameter		Unit	Tes		Test 2		Test 3	
		Unit	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
	E-UTRA RF Channel Number					1	1	
BW _{channel}		MHz		0	10		10	
Measurement b		n_{PRB}		–27	22—27		22—27	
channel define	ence measurement d in A.3.1.1.2		R.0 TDD	-	R.0 TDD	-	R.0 TDD	-
PDSCH allocat	tion	n_{PRB}	13—36	-	13—36	-	13—36	-
defined in A.3.1	asurement channel I.2.2	7100	R.6	TDD	R.6	TDD	R.6	TDD
OCNG Patterns A.3.2.2.1 (OP.1 A.3.2.2.2 (OP.2	TDD) and		OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD	OP.1 TDD	OP.2 TDD
PBCH_RA PBCH_RB PSS_RA SSS_RA PCFICH_RB PHICH_RA PHICH_RB PDCCH_RA PDCCH_RA PDSCH_RA PDSCH_RA PDSCH_RB OCNG_RA OCNG_RB OCNG_RB POCNG_RB		dB	Note 6	0	Note 6	0	Note 6	0
$N_{oc}^{ m Note2}$	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41	dBm/15 kHz	-85	5.76	-103.85		-116 -115 -114	
CRS \hat{E}_s/N_{oc}		dB	5	-1.2	5	-1.2	5	-3.2
CRS (\hat{E}_s/I_{ot})		dB	2.55	-1.20	2.55	-1/20	3.30	-3/20
RSRP ^{Note3,4,5}	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41	dBm/15 kHz	-80.76	-86.96	-98.85	-105.05	-111 -110 -109	-119.2 -118.2 -117.2
(RSRQ) _{meas} Note3,4,5	Bands 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43	dB	-12.71	-14.80	-12.71	-14.80	-12.46	-16.11
(Io) _{meas} Note 3	Bands 33, 34, 35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41	dBm/9 MHz	-51.06	-54.39	-69.15	-72.48	-81.55 -80.55 79.55	-85.20 -84.20 -83.20
Propagation co	ndition NG shall be used such	- n that both cells a	AW re fully allo			GN total trans	AW mitted pow	

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.

Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.

Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Note 5: Applies to restricted measurement subframes of the respective cell.

Note 6: Non-ABS and ABS subframe channel powers defined in Table A.3.4.1.1-1.

Table 9.2.8.1.5-2: RSRQ TDD Intra frequency under time domain measurement resource restriction with non-MBSFN ABS absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
	All bands	All bands	All bands
	Nomal Conditi	ons	
Lowest reported value (Cell 2)	RSRQ_04	RSRQ_04	RSRQ_00
Highest reported value (Cell 2)	RSRQ_16	RSRQ_16	RSRQ_15
	Extreme Condit	ions	
Lowest reported value (Cell 2)	RSRQ_01	RSRQ_01	RSRQ_00
Highest reported value (Cell 2)	RSRQ_19	RSRQ_19	RSRQ_16

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.9 FDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with MBSFN ABS

9.2.9.1 FDD Absolute RSRQ under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The connection diagram is FFS
- The Message contents are FFS
- The Test system Uncertainties are FFS
- The Test Tolerances are FFS

9.2.9.1.1 Test purpose

The purpose of this test is to verify that the RSRQ measurement accuracy under time domain measurement resource restriction with MBSFN ABS is within the specified limits for all bands.

9.2.9.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10 and forward. Applicability requires support of FGI bit 115.

9.2.9.1.3 Minimum conformance requirements

The requirements for absolute accuracy of RSRQ in this section shall apply to a cell on the same frequency as that of the serving cell when a time domain measurement resource restriction pattern for performing RSRQ measurements of this cell is configured by higher layers according to TS 36.331 [5].

The accuracy requirements in Table 9.2.9.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled,

RSRP_{dBm} according to Annex I.3.9 for a corresponding Band,

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRQ measurement,

The RSRQ measurement is not performed in any subframe other than those indicated by the time domain measurement resource restriction pattern configured for the measured cell,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.2.9.1.3-1: RSRQ Intra frequency absolute accuracy under time domain measurement resource restriction with MBSFN ABS

Accı	uracy		Conditions				
Normal	Extreme	Ês/lot	lo Note 2 range				
condition	condition	ES/IOU	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/ 15kHz Note 1	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
. 0. 5		. 0 10	28	-119.5	-50		
±2.5	±4	≥-2 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-4 dB	Note 4	Note 4	Note 4		

NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.

NOTE 2: lo is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRQ measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.9.1.3-2.

Table 9.2.9.1.3-2: RSRQ FDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clauses 9.1.5.2 and A.9.2.9.

9.2.9.1.4 Test description

9.2.9.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure [FFS].
- 2. Propagation conditions are set according to Annex B clause B.0.

- 3. Message contents are defined in clause 9.2.9.1.4.3.
- 4.. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.2.9.1.4.1-1: General test parameters for E-UTRAN FDD RSRQ intra frequency test parameters under time-domain measurement resource restriction with MBSFN ABS

	DL Reference Measurement Channel	As specified in section A.1.1
	Measurement Channel	
	R.0 FDD	
	DL Reference	As specified in section A.2.1
	Measurement Channel	
	R.6 FDD	
	Cell 1	Also the aggressor cell on E-UTRARF channel
		number 1
	Cell 2	Cell to be identified on E-UTRARF channel
		number 1
	1	One E-UTRA FDD carrier frequency is used
MHz		For all cells in the test
	OFF	
	3 μs	Synchronous cells
	(PCI _{cell1} - PCI _{cell2}) mod 6	Cell PCIs are selected so that the condition is
	= 0, PCI _{cell1} not equal to	met (colliding CRS)
	PCI _{cell2}	
		ABS subframe is only MBSFN subframe. FDD
	'01000000100000001000	ABS Pattern Info IE, as defined in TS 36.423
	00000010000001000000	[28], clause 9.2.54. The first/leftmost bit
		corresponds to the subframe #0 of the radio
		frame satisfying SFN mod $x = 0$, where x is the
		size of the bit string (40) divided by 10.
		Configured in Cell 1.
		Time domain measurement resource restriction
	00000001000000010000	pattern for PCell measurement signalled to the
		UE in meas SubframePatternPCell. The IE
		MeasSubframePattern is used to specify the
		time domain measurement resource restriction
		as defined in TS 36.331 [5], clause 6.3.6.
		Configured for Cell 1 measurements.
	60400000040000004000	Time domain measurement resource restriction
		pattern for neighbour cell measurement signalled
		to the UE in meas Subframe Pattern Neigh The IE
		MeasSubframePattern is used to specify the
		time domain measurement resource restriction
		as defined in TS 36.331 [5], clause 6.3.6. Configured for Cell 2 measurements.
	l ent subframes of the respecti	
	MHz	Cell 2 1 MHz 10 Nomal OFF 3 μs (PCl _{cell1} - PCl _{cell2}) mod 6 = 0, PCl _{cell1} not equal to PCl _{cell2} '0100000010000001000 0000010000001000000' '00010000010000001000000' '0100000010000001000 0000010000001000

9.2.9.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.2.9.1.5-1 and 9.2.9.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.

- 6. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ values for Cell 1 and Cell 2 are compared to the actual RSRQ values according to Table 9.2.9.1.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.2.9.1.4.3 Message contents

[FFS]

9.2.9.1.5 Test requirement

Table 9.2.9.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRQ FDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.9.1.5-2.

Table 9.2.9.1.5-1: Cell Specific Test requirement Parameters for E-UTRAN FDD RSRQ intra frequency test parameters under time domain measurement resource restriction with MBSFN ABS

Par	ameter	Unit	Tes	st 1	Tes	st 2	Tes	st 3
		Offic	Cell 1	Cell 2	Cell 1	Cell 2	Cell 1	Cell 2
	E-UTRA RF Channel Number		,		,		1	
BW _{channel}	OCNG Patterns defined in D.1.8		10		10		10	
(OP.8 FDD) and			OP.8	OP.6	OP.8	OP.6	OP.8	OP.6
FDD) Note5	1 D.1.0 (O1 .0		FDD	FDD	FDD	FDD	FDD	FDD
Measurement b	andwidth	n_{PRB}	22-	_27	22-	_27	22-	–27
PDSCH allocation	on ^{Note5}	n_{PRB}	13—36	-	13—36	-	13—36	-
PBCH RA		PKB						
PBCH RB								
PSS_RA								
SSS_RA								
PCFICH_RB								
PHICH_RA								
PHICH_RB		dB	0	0	0	0	0	0
PDCCH_RA								
PDCCH_RB PDSCH_RA								
PDSCH_RB								
OCNG_RA ^{Note 1}								
OCNG_RB ^{Note1}								
	Bands 1, 4, 6, 10, 11, 18, 19, 21, 23 and 24						-1	16
λ/ Note2	Bands 2, 5 and 7		-84.76	-84.76	1.76 -103.85	-103.85	-114	
$N_{oc}^{ m Note2}$	Band 25	dBm/15 kHz					-11	2.5
	Bands 3, 8, 12,							
	13, 14, 17, 20 and 22	ļ					-113	
	Band 9						-1	15
	Bands 1, 4, 6,						-1	13
	10, 11, 18, 19,						[-111]	[-120]
	21, 23and 24			[-86.76]	[-98.85]	[- 105.85]		
Note3 4.5	Bands 2, 5 and 7						[-109]	[-118]
RSRP Note3, 4,5	Band 25	dBm/15 kHz	[-79.76]				[-107.5]	[-116.5]
	Bands 3, 8, 12, 13, 14, 17, 20						[-108]	[-117]
	and 22						[-100]	[-11/]
	Band 9						[-110]	[-119]
	Bands 1, 4, 6,						1	
	10, 11, 18, 19,							
	21, 23 and 24							
(RSRQ) meas	Bands 2, 5 and 7	٩D	[12 02]	[45 00]	[12 00]	[45.00]	[10 00]	[16.90]
Note3,4,5	Band 25 Bands 3, 8, 12,	dB	[-12.60]	[-15.02]	[-12.60]	[-15.02]	[-12.38]	[-16.36]
	13, 14, 17, 20							
	and 22							
	Band 9							
	Bands 1, 4, 6,							
	10, 11, 18, 19,						[-81.63]	[-85.37]
(Io) meas Note3	21, 23 and 24 Bands 2, 5 and 7						[-79.63]	[-83.37]
1st OFDM	Band 25	dBm/9 MHz	[-50.17]	[-53.64]	[-69.26]	[-72.73]	[-78.13]	[-81.87]
symbol	Bands 3, 8, 12,	GDIII/O IVII IZ	[50.17]	[00.04]	[03.20]	[12.13]	[70.10]	[01.07]
	13, 14, 17, 20						[-78.63]	[-82.37]
	and 22							
NI	Band 9						[-80.63]	[-84.37]
(Io) meas	Bands 1, 4, 6,						[04 66]	100 701
OFDM symbols other	10, 11, 18, 19, 21, 23 and 24	dBm/9 MHz	[-50.17]	[-54.85]	[-69.26]	[-73.94]	[-81.63]	[-86.76]
than the 1 st	Bands 2, 5 and 7			-	-		[-79.63]	[-84.76]
	zanao z, o ana r		1	1	1	1	[]	[0 0]

one	Band 25						[-78.13]	[-83.26]
	Bands 3, 8, 12, 13, 14, 17, 20 and 22						[-78.63]	[-83.76]
	Band 9						[-80.63]	[-85.76]
CRS \hat{E}_s/N_{oc}		dB	[5]	[-2]	[5]	[-2]	[5]	[-4]
CRS (\hat{E}_s/I_{ot})		dB	[2.88]	[-8.19]	[2.88]	[-8.19]	[3.54]	[-10.19]
Propagation cor	ndition	-	AW	GN	AW	'GN	AW	GN

- Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for $\,N_{oc}\,$ to be fulfilled. Applies to all subframes.
- Note 3: RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes
- Note 4: RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.
- Note 5: Applies to restricted measurement subframes of the respective cell.

Table 9.2.9.1.5-2: RSRQ FDD Intra frequency under time domain measurement resource restriction with MBSFN ABS absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3
	All bands	All bands	All bands
	Nomal Condition	ons	
Lowest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]
Highest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]
	Extreme Conditi	ons	
Lowest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]
Highest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.10 TDD RSRQ Accuracy under Time Domain Measurement Resource Restriction with MBSFN ABS

9.2.10.1 TDD RSRQ under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC)

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

- The connection diagram is FFS
- The Message contents are FFS
- The Test system Uncertainties are FFS
- The Test Tolerances are FFS

9.2.10.1.1 Test purpose

The purpose of this test is to verify that the RSRQ measurement accuracy under time domain measurement resource restriction with MBSFN ABS is within the specified limits for all bands.

9.2.10.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 10. Applicability requires support of FGI bit 115

9.2.10.1.3 Minimum conformance requirements

The requirements for absolute accuracy of RSRQ in this section shall apply to a cell on the same frequency as that of the serving cell when a time domain measurement resource restriction pattern for performing RSRQ measurements of this cell is configured by higher layers according to TS 36.331 [5].

The accuracy requirements in Table 9.2.10.1.3-1 are valid under the following conditions:

Cell specific reference signals in the measured cell are transmitted either from one, two or four antenna ports,

Conditions defined in TS 36.101 [2] Section 7.3 for reference sensitivity are fulfilled,

RSRP_{dBm} according to Annex I.3.9 for a corresponding Band,

The time domain measurement resource restriction pattern configured for the measured cell indicates at least one subframe per radio frame for performing the RSRQ measurement,

The RSRQ measurement is not performed in any subframe other than those indicated by the time domain measurement resource restriction pattern configured for the measured cell,

Four symbols containing CRS are available in all subframes indicated by the time domain measurement resource restriction pattern.

Table 9.2.10.1.3-1: RSRQ Intra frequency absolute accuracy under time domain measurement resource restriction with MBSFN ABS

Acci	uracy		Conditions				
Normal	Extreme	Ês/lot	lo Note 2 range				
condition	condition	LS/IOL	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/ 15kHz ^{Note 1}	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
			28	-119.5	-50		
±2.5	±4	≥-2 dB	2, 5, 7, 27, 41, [44]	-119	-50		
			26	-118.5 Note 3	-50		
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-4 dB	Note 4	Note 4	Note 4		

NOTE 1: This minimum lo condition is expressed as the average lo per RE over all REs in that symbol.

NOTE 2: Io is defined in subframes indicated by the time domain measurement resource restriction pattern configured for performing RSRQ measurements of this cell. The lo range defined by the minimum and the maximum lo levels applies to CRS and non-CRS symbols. Io may be different in different symbols within a subframe.

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.10.1.3-2.

Table 9.2.10.1.3-2: RSRQ TDD Intra frequency absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clauses 9.1.5.2 and A.9.2.10.

9.2.10.1.4 Test description

9.2.10.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure [FFS].
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.9.1.4.3.
- 4. Cell 1 is the serving cell as well as aggressor cell to Cell 2, Cell 2 is the neighbouring cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.2.10.1.4.1-1: General test parameters for E-UTRAN TDD RSRQ intra frequency test parameters under time-domain measurement resource restriction with MBSFN ABS

Parameter	Unit	Value	Comment
Serving cell (PCell)		Cell 1	The aggressor cell to Cell 2
Neighbour cell		Cell 2	Cell to be measured
E-UTRA RF Channel Number		1	One TDD carrier frequency is used
Channel Bandwidth (BW _{channel})	MHz	10	For both cells in the test
Special subframe configuration		6	For Cell 1 and Cell 2. For special subframe
			configurations see Table 4.2-1 in [16].
Uplink/downlink subframe		1	For Cell 1 and Cell 2. For uplink-downlink
configuration			subframe configurations see Table 4.2-2 in [16].
CP length		Nomal	For both cells in the test
DRX			OFF
Time offset between cells		3 μs	Synchronous cells
Physical cell ID PCI		(PCI _{cell1} - PCI _{cell2})mod6	Cell PCIs for Cell 1 and Cell 2 are selected
		=0 PCI _{cell1} not equal to	randomly so that the condition is met
		PCI _{cell2}	
ABS pattern			MBSFN ABS pattern. TDD ABS Pattern Info IE,
		'0000100000000100000'	as defined in TS 36.423 [28], clause 9.2.54.
			Configured in Cell 1.
			The first/leftmost bit corresponds to the
			subframe #0 of a radio frame satisfying SFN
			mod 20 = 0. All ABS subframes are MBSFN
			subframes.
Time-domain measurement			Configured for Cell 2 measurements by
resource restriction pattern for		'0000100000000100000'	meas Subframe Pattern-Neigh IE in
neighbour cell measurements on			meas Subframe Pattern Config-Neigh, as defined
RF Channel 1			in TS 36.331 [5], clause 6.3.5.
			meas Subframe CellList contains Cell 2.
Time-domain measurement	_	'100000000100000000'	Configured for measurements on Cell 1.
resource restriction pattern for			
serving cell measurements			

9.2.10.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 5.2.A2.
- 2. Set the parameters according to Table 9.2.9.1.5-1 and 9.2.9.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ values for Cell 1 and Cell 2 are compared to the actual RSRQ values according to Table 9.2.9.1.5-3.
- 7. SS shall check the Measurement Report messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved.

9.2.10.1.4.3 Message contents

[FFS]

9.2.10.1.5 Test requirement

Table 9.2.10.1.5-1 defines the primary level settings including test tolerances for all tests.

Each RSRQ TDD intra frequency absolute accuracy test shall meet the reported values test requirements in Table 9.2.10.1.5-2.

Table 9.2.10.1.5-1: Cell Specific Test requirement Parameters for E-UTRAN TDD RSRQ intra frequency test parameters under time domain measurement resource restriction with MBSFN ABS

Por		tor	Unit	Tes	st 1	Tes	st 2	Tes	st 3
Parameter		Unit	Cell 1 Cell 2		Cell 1 Cell 2		Cell 1 Cell 2		
Measurement bandwidth		$n_{\it PRB}$	22—27		22—27		22—27		
PDSCH Reference measurement channel defined in A.3.1.1.2			R.0 TDD	-	R.0 TDD	-	R.0 TDD	-	
PDSCH allocation	PDSCH allocation		n_{PRB}	13—36	-	13—36	-	13—36	-
PDCCH/PCFICH/PHICH Reference measurement channel defined in A.3.1.2.2			R.6 TDD		R.6 TDD		R.6 TDD		
OCNG Patterns defined in D.2.5 (OP.5 TDD) and D.2.2 (OP.2 TDD)			OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD	OP.5 TDD	OP.2 TDD	
PBCH_RA PBCH_RB						0	0	0	0
PSS_RA									
SSS_RA									
PCFICH_RB									
PHICH_RA PHICH_RB			dB	0	0				
PDCCH RA			uБ		0				
PDCCH_RB									
PDSCH_RA									
PDSCH_RB									
OCNG_RA	OCNG_RA ^{NOTE}								
OCNG_RB	I R	ands 33, 34,							
Note 2	35, 36, 37, 38, 39, 40 Bands 42, 43		dBm/15 kHz	-84.76	-84.76	-103.85	-103.85	-116	
$N_{oc}^{ m Note3}$									
								-115	
	В	and 41						-1	1
	CRS \hat{E}_s/N_{oc}		dB	[5]	[-2]	[5]	[-2]	[5]	[-4]
CRS $(\hat{E}_s/Iot)_{meas}$ Not		1 st symbol	dB	[2.88]	[-8.19]	[2.88]	[-8.19]	[3.54]	[-10.19]
		ands 33, 34,						[444]	[420]
RSRP ^{Note4,5,6}	35, 36, 37, 38, 39, 40 Bands 42, 43 Band 41		dBm/15 kHz	[-79.76]	[-86.76]	[-98.85]	[-	[-111]	[-120]
TOTAL					[00.70]		105.85]	[-110]	[-119]
								[-109]	[-118]
(RSRQ) _{meas}	35	ands 33, 34, 5, 36, 37, 38, 9, 40, 41, 42, 3	dB	[-12.60]	[-15.02]	[-12.60]	[-15.02]	[-12.38]	[-16.36]
(Io) _{meas} Note 4	35	Bands 33, 34, 35, 36, 37, 38, 39, 40 dBm/9 MHz		[-50.17]	[-53.64]	[-69.26]	[-72.73]	[-81.63]	[-85.37]
in the 1 st OFDM symbol	OFDM symbol Bands 42, 43 Band 41		u3.11/6 Nii 12					[-80.63]	[-84.37]
								[-79.63]	[-83.37]
$(Io)_{meas}^{Note 4}$ in OFDM	meas 35 36 37 38		dD (C Mill	[-50.17]	[-54.85]	[-69.26]	[-73.94]	[-81.63]	[-86.76]
symbols other		Bands 42, 43 dBm/9 MHz						[-80.63]	[-85.76]
one	than the 1°°							[-79.63]	[-84.76]
	1		l .	1	<u>I</u>	<u>I</u>	<u>I</u>	1	1

Propagation condition		-	AWGN	AWGN	AWGN	
Note 1:	For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.					
Note 2:	OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.					
Note 3:	Interference from other cells and noise sources not specified in the test is assumed to be constant over					
	subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.					
Note 4:	Applies to all subframes. RSRQ, RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves. Io levels are calculated in CRS symbols of measurement restricted subframes.					
Note 5:	RSRP and RSRQ minimum requirements are specified assuming independent interference and noise at each receiver antenna port.					
Note 6:						

Table 9.2.10.1.5-2: RSRQ TDD Intra frequency under time domain measurement resource restriction with MBSFN ABS absolute accuracy requirements for the reported values

	Test 1	Test 2	Test 3			
	All bands	All bands	All bands			
Nomal Conditions						
Lowest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]			
Highest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]			
Extreme Conditions						
Lowest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]			
Highest reported value (Cell 2)	RSRQ_[FFS]	RSRQ_[FFS]	RSRQ_[FFS]			

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%

9.2.11

9.2.12 TDD RSRQ for E-UTRA Carrier Aggregation for 20MHz

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

• The Test Tolerances applicable to this test are undefined

9.2.12.1 TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz

9.2.12.1.1 Test purpose

To verify that TDD absolute RSRQ measurement accuracy in carrier aggregation is within the specified limits under AWGN propagation conditions for 20MHz. This test will verify the TDD absolute RSRQ accuracy requirements of the primary component carrier and the secondary component carrier.

9.2.12.1.2 Test applicability

This test case applies to all types of E-UTRA TDD UE release 10 and forward that support CA.

9.2.12.1.3 Minimum conformance requirements

The TDD RSRQ measurements of cells on the primary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1. The TDD RSRQ measurements of cells on the secondary component carrier shall meet the intra frequency absolute accuracy requirements defined in TS 36.133 [4] clause 9.1.5.1.

The accuracy requirements in Table 9.2.12.1.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP|dBm according to Annex I.3.1 for a corresponding Band.

Table 9.2.12.1.3-1: FDD RSRQ absolute accuracy for Carrier Aggregation

Accuracy		Conditions					
Normal	Extreme	Ês/lot	lo ^{Note 1} range				
condition	condition	ES/IOL	E-UTRA operating bands	Minimum Io	Maximum lo		
dB	dB	dB		dBm/15kHz Note 5	dBm/BW _{Channel}		
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50		
			9, 42, 43	-120	-50		
. 0. 5		. 0 10	28	-119.5	-50		
±2.5	±4	≥-3 dB	2, 5, 7, 27, 41, 44	-119	-50		
			26	-118.5 Note ≥	-50		
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 4	-118	-50		
			25	-117.5	-50		
±3.5	±4	≥-6 dB	Note 3	Note 3	Note 3		

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 4: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 5: The condition level is increased by Δ>0, when applicable, as described in I.4.2 and I.4.3.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.12.1.3-2.

Table 9.2.12.1.3-2: TDD RSRQ absolute accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.1, clause 9.1.11.2, clause 9.1.5.1 and A.9.2.12.

9.2.12.1.4 Test description

9.2.12.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.

- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.12.1.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.2.12.1.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The absolute accuracy of RSRQ is defined as the RSRQ measured from the primary component carrier (Cell 1) and the RSRQ measured from the secondary component carrier (Cell 2).

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. The SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.12.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. The SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. UE shall transmit periodically Measurement Report messages.
- 9. The SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ values for Cell 1 and Cell 2 by the UE are compared to the actual RSRQ values according to Table 9.2.12.1.5-2. This counts respectively as a Pass or Fail for the events "Cell 1" and "Cell 2".
- 10. The SS shall check MeasurementReport messages transmitted by the UE until a test verdict has been achieved.

Each of the events "Cell 1" and "Cell 2" is evaluated independently for the statistic, resulting in an event verdict: pass or fail. Each event is evaluated only until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved. Different events may require different times for a verdict.

If both events pass, the test passes. If one event fails, the test fails.

9.2.12.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.12.1.4.3-1: Common Exception messages for TDD RSRQ absolute accuracy for Carrier Aggregation for 20MHz test requirement

Default Message Contents						
Common contents of system information						
blocks exceptions						
Default RRC messages and information	Table H.3.1-1					
elements contents exceptions	Table H.3.5-4					
·	Table H.4.1-5					
	Table H.4.2-1					

9.2.12.1.5 Test requirement

Table 9.2.12.1.5-1 defines the primary level settings including test tolerances for all tests.

The TDD RSRQ absolute accuracy for carrier aggregation for 20MHz test shall meet the reported values test requirements in Table 9.2.12.1.5-2.

Table 9.2.12.1.5-1: Cell Specific Test requirement Parameters for TDD RSRQ absolute accuracy for Carrier Aggregation for 20MHz

Parameters		Test 1				
		Units	Cell 1	Cell 2	Cell 3	
BW _{channel_C}	Note1	MHz	20	20	20	
	ent bandwidth	n_{PRB}	47-52	47-52	47-52	
PDSCH Remeasurement defined in A	ent channel		R.3 TDD	R.3 TDD	-	
PDSCH all		n_{PRB}	38-61	38-61	-	
Reference channel de	CFICH/PHICH measurement fined in A.2.2		R.10 TDD	R.10 TDD	R.10 TDD	
OCNG Patt D.2.7 (OP.7 D.2.8 (OP.8			OP.7 TDD	OP.7 TDD	OP.8 TDD	
lo ^{Note2}	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/18	-87.26+TT	-82.6	7+TT	
	Bands 42, 43	MHz	-86.26+TT	-81.67+TT		
	Band 41		-85.26+TT	-80.1	7+TT	
[Note 1: This test verifies the RRM requirement which is independent of channel bandwidth and is performed according to the principle defined in TS 36.133 [4] section A.3.6.1.] Note 2: lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.						
themselves. Note 3: See Table 9.2.6.1.5-1 for the other parameters.						

Table 9.2.12.1.5-2: TDD RSRQ absolute accuracy requirements for the reported values for Carrier Aggregation for 20MHz

	Test 1
	All bands
Normal Conditions	
Lowest reported value (Cell 1)	RSRQ_00+xx
Highest reported value Cell 1)	RSRQ_15+xx
Lowest reported value (Cell 2)	RSRQ_00+xx
Highest reported value Cell 2)	RSRQ_14+xx
Extreme Conditions	·
Lowest reported value (Cell 1)	RSRQ_00+xx
Highest reported value Cell 1)	RSRQ_16+xx
Lowest reported value (Cell 2)	RSRQ_00+xx
Highest reported value Cell 2)	RSRQ_15+xx

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.2.12.2 TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz

Editor's note: This test case is incomplete. The following aspects are either missing or not yet determined:

• The Test Tolerances applicable to this test are undefined

9.2.12.2.1 Test purpose

To verify that TDD relative RSRQ measurement accuracy in carrier aggregation for 20MHz is within the specified limits under AWGN propagation conditions. This test will verify the TDD relative RSRQ accuracy requirements between the primary and secondary component carriers.

9.2.12.2.2 Test applicability

This test case applies to all types of E-UTRA UE release 10 and forward that support CA.

9.2.12.2.3 Minimum conformance requirements

The TDD RSRQ measurements of cells on the primary component carrier are compared with measurements of cells on the secondary component carrier defined in TS 36.133 [4] clause 9.1.6.2. The applicable relative accuracy requirements are the RSRQ inter-frequency accuracy requirements as defined in TS 36.133 [4] clause 9.1.6.2.

The accuracy requirements in Table 9.2.12.2.3-1 are valid under the following conditions:

Cell specific reference signals are transmitted either from one, two or four antenna ports.

Conditions defined in TS 36.101 [2] clause 7.3 for reference sensitivity are fulfilled.

RSRP1,2|dBm according to Annex I.3.4 for a corresponding Band.

$$\left| RSRP1 \right|_{dBm} - RSRP2 \Big|_{dBm} \right| \le \left[27 \right] dB$$

|Channel 1_Io -Channel 2_Io | ≤ 20 dB

Table 9.2.12.2.3-1: TDD RSRQ relative accuracy for Carrier Aggregation

Accı	uracy	Conditions				
Normal	Extreme	Ês/lot Note	lo ^{Note 1} r			
condition	condition	2	E-UTRA operating bands	Minimum Io	Maximum lo	
dB	dB	dB		dBm/15kHz Note 6	dBm/BW _{Channel}	
			1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-121	-50	
			9, 42, 43	-120	-50	
			28	-119.5	-50	
±3	±4	≥-3 dB	2, 5, 7, 27, 41, 44	-119	-50	
			26	-118.5 Note 3	-50	
			3, 8, 12, 13, 14, 17, 20, 22, 29 Note 5	-118	-50	
			25	-117.5	-50	
±4	±4	≥-6 dB	Note 4	Note 4	Note 4	

NOTE 1: lo is assumed to have constant EPRE across the bandwidth.

NOTE 2: The parameter Ês/lot is the minimum Ês/lot of the pair of cells to which the requirement applies.

NOTE 3: The condition has the minimum lo of -119 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 4: The same bands and the same lo conditions for each band apply for this requirement as for the corresponding highest accuracy requirement.

NOTE 5: Band 29 is used only for E-UTRA carrier aggregation with other E-UTRA bands.

NOTE 6: The condition level is increased by $\Delta > 0$, when applicable, as described in I.4.2 and I.4.3.

The reporting range of RSRQ is defined from -19.5 dB to -3 with 0.5 dB resolution. The mapping of measured quantity is defined in Table 9.2.12.2.3-2.

Table 9.2.12.2.3-2: TDD RSRQ relative accuracy measurement report mapping for Carrier Aggregation

Reported value	Measured quantity value	Unit
RSRQ_00	RSRQ < -19.5	dB
RSRQ_01	-19.5 ≤ RSRQ < -19	dB
RSRQ_02	-19 ≤ RSRQ < -18.5	dB
RSRQ_32	-4 ≤ RSRQ < -3.5	dB
RSRQ_33	-3.5 ≤ RSRQ < -3	dB
RSRQ_34	-3 ≤ RSRQ	dB

The normative reference for this requirement is TS 36.133 [4] clause 9.1.11.3, clause 9.1.6.2 and A.9.2.12.

9.2.12.2.4 Test description

9.2.12.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1 for different CA bandwidth classes.

Channel Bandwidth to be tested: 20 MHz as defined in TS 36.508 [7] clause 4.3.1 for different CA configurations as defined in TS 36.521-1[10] clause 5.4.2A.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A, Figure group A.41 as appropriate.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.2.12.2.4.3.
- 4. There are two E-UTRA TDD carriers with one cell on one E-UTRA TDD carrier and two cells on the other E-UTRA TDD carrier specified in the test. Cell 1 is PCell on the PCC, Cell 2 is the SCell on the Secondary Component Carrier (SCC), and Cell 3 is a neighbour cell on the SCC. PCell (Cell 1) is the cell used for connection setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 and Cell 3 shall be powered OFF.

9.2.12.2.4.2 Test procedure

The test consists of Cell 1 the PCell, Cell 2 the SCell on the Secondary Component Carrier (SCC), and Cell 3 the neighbouring cell on the SCC. The SCell (Cell 2) and neighbouring cell (Cell 3) on the SCC are configured. The SCell (Cell 2) on the SCC is activated. The relative accuracy of RSRQ is defined as the RSRQ measured cells on the primary component carrier compared with measurements of cells on the secondary component carrier,

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Configure SCC according to Annex C.0 and C.1 for all downlink physical channels except PHICH.
- 3. The SS shall configure the SCell (Cell 2) on the SCC as per TS 36.508 [7] clause 5.2A.4.
- 4. The SS activates SCC by sending the MAC-CE according to TS 36.321 [11] clauses 5.13 and 6.1.3.8. Wait for at least 2 seconds as per TS 36.133 [4] clause 8.3.3.2.
- 5. Set the parameters according to Table 9.2.12.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 6. The SS shall transmit an RRCConnectionReconfiguration message.
- 7. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 8. The UE shall transmit periodically MeasurementReport messages.

- 9. The SS shall check the reported RSRQ values in MeasurementReport messages. The reported RSRQ value for Cell 2 is compared to the reported RSRQ value for Cell 1 for each MeasurementReport message according to Table 9.2.12.2.5-2.
- 10. The SS shall check MeasurementReport messages transmitted by the UE until the confidence level according to table G.2.3-1 in Annex G.2 is achieved.

9.2.12.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.2.12.2.4.3-1: Common Exception messages for TDD RSRQ relative accuracy for Carrier Aggregation for 20MHz test requirement

Default Message Contents							
Common contents of system information blocks exceptions							
Default RRC messages and information	Table H.3.1-1						
elements contents exceptions	Table H.3.5-4						
	Table H.4.1-5 Table H.4.2-1						

9.2.12.2.5 Test requirement

Table 9.2.12.2.5-1 defines the primary level settings including test tolerances for all tests.

The TDD RSRQ relative accuracy for carrier aggregation for 20MHz test shall meet the reported values test requirements in Table 9.2.12.2.5-2.

Table 9.2.12.2.5-1: Cell Specific Test requirement Parameters for TDD RSRQ relative accuracy for Carrier Aggregation

Por	ameters	Test 1				
		Units	Cell 1	Cell 2	Cell 3	
BW _{channel_CA}	Note1	MHz	20	20	20	
Measureme	ent bandwidth	n_{PRB}	47-52	47-52	47-52	
PDSCH Re measurement defined in A	ent channel		R.3 TDD	R.3 TDD	-	
PDSCH allo	ocation	n_{PRB}	38-61	38-61	-	
Reference	CFICH/PHICH measurement fined in A.2.2		R.10 TDD	R.10 TDD	R.10 TDD	
OCNG Patt D.2.7 (OP.7 D.2.8 (OP.8	,		OP.7 TDD	OP.7 TDD	OP.8 TDD	
Nessa	Bands 33, 34, 35, 36, 37, 38, 39, 40	dBm/18	- 87.26+TT	-82.67 + TT		
lo ^{Note2}	Bands 42, 43	MHz	- 86.26+TT	-81.67+TT		
	Band 41		- 85.26+TT	-80.17+TT		
[Note 1: This test verifies the RRM requirement which is independent of channel bandwidth and is performed according to the principle defined in TS 36.133 [4] section A.3.6.1.] Note 2: lo levels have been derived from other parameters for information purposes. They are not settable parameters						
themselves. Note 3: See Table 9.2.5.1.5-1 for the other parameters.						

Table 9.2.12.2.5-2: TDD RSRQ relative accuracy requirements for the reported values for Carrier Aggregation for 20MHz

	Test 1
	All bands
Normal Conditions	
Lowest reported value (Cell 2)	RSRQ_x - 12+xx
Highest reported value (Cell 2)	RSRQ_x + 9+xx
Extreme Conditions	
Lowest reported value (Cell 2)	RSRQ_x - 12+xx
Highest reported value (Cell 2)	RSRQ_x + 9+xx
RSRQ_x is the reported value of Cell 1	•

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.3 UTRA FDD CPICH RSCP

9.3.1 E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.3.1.1 Test purpose

To verify that the CPICH RSCP absolute measurement accuracy is within the specified limits.

9.3.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 9 and forward that support UTRA FDD.

9.3.1.3 Minimum conformance requirements

The accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for FDD CPICH RSCP.

In RRC_CONNECTED state the accuracy requirements shall meet the absolute accuracy requirements in table 9.3.1.3-1.

Table 9.3.1.3-1: UTRAN FDD CPICH_RSCP absolute accuracy

		Accuracy [dB]		Conditions				
Parameter	Unit	Normal conditio	Extreme conditio	Band I, IV, VI, X, XI, XIX and XXI	Band II, V and VII	Band XXV and XXVI	Band III, VIII, XII, XIII, XIV, XX and XXII	Band IX
		n	n	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]
CPICH_RS	dBm	± 6	± 9	-9470	-9270	-90.570 Note 1	-9170	-9370
CP	dBm	± 8	± 11	-7050	-7050	-7050	-7050	-7050

Note 1: The condition is -92...-70 dBm/3.84 MHz when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRAN FDD measurements, the UTRAN FDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.1 shall apply.

The reporting range and mapping specified for FDD CPICH RSCP is defined in Table 9.3.1.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.3.1.3-2: CPICH RSCP measurement report mapping

Reported value	Measured quantity value	Unit
CPICH_RSCP_LEV05	CPICH RSCP <-120	dBm
CPICH_RSCP_LEV04	-120 ≤ CPICH RSCP < -119	dBm
CPICH_RSCP_LEV03	-119 ≤ CPICH RSCP < -118	dBm
CPICH_RSCP_LEV_89	-27 ≤ CPICH RSCP < -26	dBm
CPICH_RSCP_LEV_90	-26 ≤ CPICH RSCP < -25	dBm
CPICH_RSCP_LEV_91	-25 ≤ CPICH RSCP	dBm

The normative reference for this requirement is TS 25.133 [21] clauses 9.1.1.2 and 9.1.1.3 and TS 36.133 [4] clause 9.2.1 and A.9.3.1.

9.3.1.4 Test description

9.3.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. The general test parameter settings are set up according to Table 9.3.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.3.1.4.3.
- 5. Cell 1 is the serving E-UTRAN FDD cell and Cell 2 is the target UTRAN FDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.3.1.4.1-1: General test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 FDD	As specified in section A.1.1
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.6 FDD	
E-UTRAN RF Channel		1	One E-UTRAN FDD carrier frequency is
Number			used.
UTRAN RF Channel Number		1	One UTRAN FDD carrier frequency is used.
E-UTRAN Channel	MHz	10	
Bandwidth (BW _{channel})			
Active cell		Cell 1	E-UTRAN cell 1 on RF channel number 1
Neighbour cells		Cell 2	UTRAN cell 2 on RF channel number 1
Gap Pattern Id		0	As specified in 3GPP TS 36.133 section 8.1.2.1.
Inter-RAT (UTRAN FDD) measurement quantity		CPICH RSCP	
Monitored UTRA FDD cell list		12	UTRA cells on UTRA RF channel 1
size			provided in the cell list.
CP length		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF

9.3.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.3.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check CPICH_RSCP reported values of Cell 2 in MeasurementReport messages according to Table 9.3.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.3.1.5-1 as appropriate.

9.3.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.3.1.4.3-1: MeasConfig- DEFAULT: Additional E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4		:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f1		
measObject CHOICE {			
m eas Object EUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f2		
measObject CHOICE {			
m eas ObjectUTRA	MeasObjectUTRA- GENERIC(f2)	UTRA Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigld))OF SEQUENCE {			
reportConfigld	idReportConfig-P		
reportConfig	ReportConfigInterRAT- PERIODICAL		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {			
measId	1		
meas ObjectId	IdMeasObject-f2		
reportConfigld	idReportConfig-P		
}			
quantityConfig	QuantityConfig- DEFAULT		
meas Gap Config	MeasGapConfig-GP1		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}	140t produit		
J			

Table 9.3.1.4.3-2: MeasResults: Additional E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
meas ResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
meas ResultListUTRA	MeasResultListUTRA		
}			
•			

Table 9.3.1.4.3-3: MeasResultListUTRA: Additional E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultsListUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	PhysCellIdUTRA-FDD		
tdd	Not Present		
}			
meas Result SEQUENCE {			
utra-RSCP	Set according to specific		
	test INTEGER (-591)		
}			
}			

Table 9.3.1.4.3-4: QuantityConfig-DEFAULT: Additional E-UTRAN FDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table	4.6.6-3A: QuantityConfig-DEFA	ULT	
Information Element	Value/remark	Comment	Condition
QuantityConfig-DEFAULT ::= SEQUENCE {			
quantityConfigEUTRA SEQUENCE {			
filterCoefficientRSRP	fc0		
filterCoefficientRSRQ	fc0		
}			
quantityConfigUTRA SEQUENCE {			
measQuantityUTRA-FDD	cpich-RSCP		
filterCoefficient	fc0		
}			

9.3.1.5 Test requirement

The test parameters are given in Tables 9.3.1.4.1-1, 9.3.1.5-1 and 9.3.1.5-2 as below. Table 9.3.1.5-2 and 9.3.1.5-3 define the primary level settings including test tolerances for all tests.

Table 9.3.1.5-1: E-UTRAN FDD cell specific test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Test 1	Test 2
E-UTRAN RF Channel Number		1	
BW _{channel}	MHz	10	0
OCNG Patterns defined in D.1.1 (OP.1 FDD)		OP.1	FDD

PBCH RA	dB	
PBCH_RB	dB	
PSS_RA	dB	
SSS_RA	dB	
PCFICH_RB	dB	
PHICH_RA	dB	
PHICH_RB	dB	0
PDCCH_RA	dB	
PDCCH_RB	dB	
PDSCH_RA	dB	
PDSCH_RB	dB	
OCNG_RA ^{NOLE 1}	dB	
OCNG_RB ^{NOTE 1}	dB	
$N_{oc}^{ m Note~2}$	dBm/15 kHz	-98
RSRP Note 3	dBm/15 kHz	-94
\hat{E}_{s}/I_{ot}	dB	4
SCH_RP Note 3	dBm/15 kHz	-94
\hat{E}_s/N_{oc}	dB	4
Propagation Condition		AWGN

Note 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted pow er spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled

Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.3.1.5-2: UTRAN FDD cell specific test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN FDD

	Parameter		Test 1	Test 2
			Cell 2	Cell 2
	CPICH_Ec/lor	dB	-10	-10
	PCCPCH_Ec/lor	dB	-12	-12
	SCH_Ec/lor	dB	-12	-12
	PICH_Ec/lor		-15	-15
	DPCH_Ec/lor		-	-
	OCNS_Ec/lor	dB	-0.94	-0.94
loc	Band I, IV, VI, X, XI, XIX,	dBm/3.84		-93.76
	XXI	MHz		
	Band II, V, VII			-91.76
	Band XXV, XXVI		-60.75	-90.26 (Note 3)
	Band III, VIII, XII, XIII, XIV,			-90.76
	XX, XXII			
	Band IX (Note 2)	1		-92.76
	lor/loc	dB	9.54	-9. 19
CPICH	Band I, IV, VI, X, XI, XIX,	dBm		-112.95
RSCP,	XXI			
Note 1	Band II, V, VII	1		-110.95
	Band XXV, XXVI	1	-61.21	-109.45 (Note 3)
	Band III, VIII, XII, XIII, XIV,	1		-109.95
	XX, XXII			
	Band IX (Note 2)			-111.95
lo, Note 1	Band I, IV, VI, X, XI, XIX,	dBm/3.84		-93.27
	XXI	MHz		
	Band II, V, VII	1		-91.27
	Band XXV, XXVI		-50.75	-89.77 (Note 3)
	Band III, VIII, XII, XIII, XIV,			-90.27
	XX, XXII			
	Band IX (Note 2)			-92.27
P	ropagation condition	-	AWGN	AWGN
NOTE 1:	CPICH RSCP and lo levels ha	ave been ca	alculated from other param	eters for information
	purposes. They are not settab	ole paramet	ers themselves.	
	For the UE which supports bo			quencies, the
	measurement performance re			
	The test parameter is modifie			
	channel is within 869-894 MH			
	operating frequencies.			
	Tests shall be done sequentia			
1	test parameters for test 2 sha	Il be set with	hin 5 se∞nds so that UE o	does not loose the Cell 2
 	in between the tests.			

Each UTRAN FDD CPICH RSCP absolute measurement accuracy test shall meet the reported values test requirements in table 9.3.1.5-3.

Table 9.3.1.5-3: UTRAN FDD CPICH RSCP absolute measurement accuracy requirements for the reported values

	Test 1			Test 2			
		Band I, IV,	Band II, V,	Band XXV,	Band III,		
	All bands	VI, X, XI,	VII	XXVI	VIII, XII,	Band IX	
	Alibanus	XIX, XXI		(Note 2)	XIII, XIV,	(Note 1)	
					XX, XXII		
Nomal Conditions							
Lowest reported value (Cell 2)	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
Lowest reported value (Cell 2)	P_46	CP04	CP02	CP01	CP01	CP03	
Llighest reported value (Call 2)	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
Highest reported value (Cell 2)	P_63	CP_9	CP_11	CP_13	CP_12	CP_10	
Extreme Conditions							
Lowest reported value (Cell 2)	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
Lowest reported value (Cell 2)	P_43	CP05	CP05	CP04	CP04	CP05	
Highest reported value (Call 2)	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
Highest reported value (Cell 2)	P_66	CP_12	CP_14	CP_16	CP_15	CP_13	
NOTE 1: For a multiband UE su	ipporting both B	and III and Bai	nd IX, for Band	IX apply the t	est requireme	nts of Band	
III. (Reference Table 9	9.3.1.5-2, Note 2	2).					
NOTE 2: For a multiband UE su	OTE 2: For a multiband UE supporting both Band V and Band XXVI, for Band XXVI when the carrier frequency of						

the assigned UTRA channel in is within 869-894 MHz apply the test requirements of Band V. (Reference

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.3.2.1 Test purpose

Table 9.3.1.5-2, Note 3).

To verify that the E-UTRANTDD - UTRA FDD CPICH RSCP absolute measurement accuracy is within the specified limits.

9.3.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward that support UTRA FDD.

9.3.2.3 Minimum conformance requirements

The accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for FDD CPICH RSCP.

In RRC_CONNECTED state the accuracy requirements shall meet the absolute accuracy requirements in table 9.3.2.3-1.

Table 9.3.2.3-1: UTRAN FDD CPICH RSCP absolute accuracy

Parameter	Unit	Accurac	cy [dB]			Conditions		
,				Band I, IV, VI, X	Band II, V and	Band XXV, XXVI	Band III, VIII,	Band IX
,		Normal		XI, XIX and XXI	VII	, '	XII, XIII, XIV, XX	
,			condition	211, 711, 71		, <u> </u>	and XXII	<u> </u>
,		Condition	i Condition i	lo	lo	lo	lo	lo
. 1								
'		١	'	[dBm/3,84 MHz]	[dBm/3,84 MHz]		[dBm/3,84 MHz]	
CPICH_RSCP	dBm	±6	±9	[dBm/3,84 MHz] -9470	[dBm/3,84 MHz] -9270	[dBm/3,84 MHz] -90.570 Note 1	[dBm/3,84 MHz] -9170	[dBm/3,84 -937

Note 1: For Band XXVI, the condition is -92...-70 dBm/3,84 MHz when the carrier frequency of the assigned UTRA channel is within 894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

^{9.3.2} E-UTRAN TDD - UTRA FDD CPICH RSCP absolute accuracy

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRAN FDD measurements, the UTRAN FDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.1 shall apply.

The reporting range and mapping specified for FDD CPICH RSCP is defined in Table 9.3.2.3-2. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.3.2.3-2: CPICH RSCP measurement report mapping

Reported value	Measured quantity value	Unit
CPICH_RSCP_LEV05	CPICH RSCP <-120	dBm
CPICH_RSCP_LEV04	-120 ≤ CPICH RSCP < -119	dBm
CPICH_RSCP_LEV03	-119 ≤ CPICH RSCP < -118	dBm
•••		
CPICH_RSCP_LEV_89	-27 ≤ CPICH RSCP < -26	dBm
CPICH_RSCP_LEV_90	-26 ≤ CPICH RSCP < -25	dBm
CPICH_RSCP_LEV_91	-25 ≤ CPICH RSCP	dBm

The normative reference for this requirement is TS 25.133 [21] clauses 9.1.1.2 and 9.1.1.3 and TS 36.133 [4] clause 9.2.1 and A.9.3.2.

9.3.2.4 Test description

9.3.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. The general test parameter settings are set up according to Table 9.3.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.3.2.4.3.
- 5. Cell 1 is the serving E-UTRAN TDD cell and Cell 2 is the target UTRAN FDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.3.2.4.1-1: General test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement	As specified in section A.1.2
		Channel R.0 TDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.1
parameters		Channel R.6 TDD	
E-UTRAN RF Channel		1	One E-UTRAN TDD carrier frequency is
Number			used.
UTRAN RF Channel		1	One UTRAN FDD carrier frequency is
Number			used.
E-UTRAN Channel	MHz	10	
Bandwidth (BW _{channel})			
Active cell		Cell 1	E-UTRAN cell 1 on RF channel number 1
Neighbour cells		Cell 2	UTRAN cell 2 on RF channel number 1
Gap Pattern Id		1	As specified in 3GPP TS 36.133 section
			8.1.2.1.
Inter-RAT (UTRAN FDD)		CPICH RSCP	
measurement quantity			
Monitored UTRA FDD cell		12	UTRA cells on UTRA RF channel 1
list size			provided in the cell list.
CP length		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF

9.3.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.3.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check CPICH_RSCP reported values of Cell 2 in MeasurementReport messages according to Table 9.3.2.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.3.2.5-1 as appropriate.

9.3.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.3.2.4.3-1: MeasConfig- DEFAULT: Additional E-UTRAN TDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAUL	T:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	ldMeasObject-f1		
measObject CHOICE {			
meas Object EUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f8		
measObject CHOICE {			
meas ObjectUTRA	Meas ObjectUTRA- GENERIC(f8)	UTRA Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId))OF SEQUENCE {			
reportConfigld	idReportConfig-P		
reportConfig	ReportConfigEUTRA- PERIODICAL		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measld	1		
meas ObjectId	IdMeasObject-f8		
reportConfigId	idReportConfig-P		
}			
quantityConfig	QuantityConfig- DEFAULT		
meas GapConfig	Meas Gap Config-GP2		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

Table 9.3.2.4.3-2: MeasResults: Additional E-UTRAN TDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
meas ResultListUTRA	MeasResultListUTRA		
}			
•			

Table 9.3.2.4.3-3: MeasResultListUTRA: Additional E-UTRAN TDD - UTRA FDD CPICH RSCP absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
Meas Results ListEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	PhysCellIdUTRA-FDD		
tdd	Not Present		
}			
cgi-Info SEQUENCE {			
cellGloballd	CellGlobalIdUTRA		
locationAreaCode	LocationAreaCode		
routingAreaCode	RoutingAreaCode		
plmn-ldentityList	Not present		
}			
measResult SEQUENCE {			
utra-RSCP	According to specific test		
}			
}			

9.3.2.5 Test requirement

The test parameters are given in Tables 9.3.2.4.1-1, 9.3.2.5-1 and 9.3.2.5-2 as below. Table 9.3.2.5-2 and 9.3.2.5-3 define the primary level settings including test tolerances for all tests.

Each UTRAN FDD CPICH RSCP absolute measurement accuracy test shall meet the reported values test requirements in table 9.3.2.5-3.

Table 9.3.2.5-1: E-UTRAN TDD cell specific test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Test 1	Test 2
E-UTRAN RF Channel Number			1
BW _{channel}	MHz	1	10
Special subframe configuration Note:			6
Uplink-downlink configuration Notes			1
OCNG Patterns defined in D.2.1 (OP.1 TDD)		OP.1	TDD
PBCH_RA	dB		
PBCH_RB	dB		
PSS_RA	dB		
SSS_RA	dB		
PCFICH_RB	dB		
PHICH_RA	dB		
PHICH_RB	dB		0
PDCCH_RA	dB		
PDCCH_RB	dB		
PDSCH_RA	dB		
PDSCH_RB	dB		
OCNG_RA ^{Note 2}	dB		
OCNG_RB ^{Note 2}	dB		
$N_{oc}^{ m Note 3}$	dBm/15 kHz	-!	98
RSRP Note 4	dBm/15 kHz	-(94
\hat{E}_{s}/I_{ot}	dB		4
SCH_RP Note 4	dBm/15 kHz	-!	94
\hat{E}_s/N_{oc}	dB		4
Propagation Condition			/GN

- Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.
- Note 2: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.
- Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.
- Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.3.2.5-2: UTRAN FDD cell specific test parameters for UTRAN FDD CPICH RSCP absolute measurement accuracy test in E-UTRAN TDD

	Parameter	Unit	Test 1	Test 2	
			Cell 2	Cell 2	
	CPICH_Ec/lor	dB	-10	-10	
	PCCPCH_Ec/lor	dB	-12	-12	
	SCH_Ec/lor		-12	-12	
	PICH_Ec/lor		-15	-15	
	DPCH_Ec/lor	dB	-	-	
	OCNS_Ec/lor	dB	-0.94	-0.94	
loc	Band I, IV, VI, X, XI, XIX,	dBm/3.84		-93.76	
	XXI	MHz			
	Band II, V, VII	1		-91.76	
	Band XXV, XXVI	1	-60. 75	-90.26 (Note 3)	
	Band III, VIII, XII, XIII, XIV,	1		-90.76	
	XXII				
	Band IX (Note 2)	1		-92.76	
	Ïor/loc		9.54	-9.19	
CPICH	Band I, IV, VI, X, XI, XIX,	dBm		-112.95	
RSCP,	XXI				
Note 1	Band II, V, VII			-110.95	
	Band XXV, XXVI	1	-61.21	-109.45 (Note 3)	
	Band III, VIII, XII, XIII, XIV,	1		-109.95	
	XXII				
	Band IX (Note 2)	1		-111.95	
lo, Note 1	Band I, IV, VI, X, XI, XIX,	dBm/3.84		-93.27	
	XXI	MHz			
	Band II, V, VII	1		-91.27	
	Band XXV, XXVI		-50. 75	-89.77 (Note 3)	
	Band III, VIII, XII, XIII, XIV,			-90.27	
	XXII				
	Band IX (Note 2)	1		-92.27	
	ropagation condition	-	AWGN	AWGN	
NOTE 1:	CPICH RSCP and lo levels ha	ave been ca	lculated from other param	eters for information	
	purposes. They are not settab				
NOTE 2: For the UE which supports both Band III and Band IX operating frequencies, the					
measurement performance requirements for Band III shall apply to the multi-band UE.					
NOTE 3:	The test parameter is modified	d by -1.5 dB	when the carrier frequence	cy of the assigned UTRA	

NOTE 3: The test parameter is modified by -1.5 dB when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for test 2 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.

Table 9.3.2.5-3: UTRAN FDD CPICH RSCP absolute measurement accuracy requirements for the reported values

	Test 1			Test 2			
	All bands	Band I, IV, VI, X, XI, XIX, XXI	Band II, V, VII	Band XXV, XXVI	Band III, VIII, XII, XIII, XIV, XX, XXII	Band IX	
Normal Conditions							
Lowest reported value (Cell 2)	CPICH_RS	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
	CP_46	P04	CP02	CP01	CP01	CP03	
Highest reported value (Cell 2)	CPICH_RS	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
	CP_63	P_9	CP_11	CP_13	CP_12	CP_10	
Extreme Conditions	Extreme Conditions						
Lowest reported value (Cell 2)	CPICH_RS	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
	CP_43	P05	CP05	CP04	CP04	CP05	
Highest reported value (Cell 2)	CPICH_RS	CPICH_RSC	CPICH_RS	CPICH_RS	CPICH_RS	CPICH_RS	
	CP_66	P_12	CP_14	CP_16	CP_15	CP_13	

9.4 UTRAN FDD CPICH Ec/No

9.4.1 E-UTRAN FDD - UTRA FDD CPICH Ec/No absolute accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.4.1.1 Test purpose

To verify that the E-UTRAN FDD - UTRA FDD CPICH Ec/No absolute measurement accuracy is within the specified limits.

9.4.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 9 and forward that support UTRA FDD.

9.4.1.3 Minimum conformance requirements

The accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for FDD CPICH Ec/No

The accuracy requirements in table 9.4.1.3-1 are valid under the following conditions:

CPICH_RSCP_{|dBm} ≥ -114 dBm for Bands I, IV, VI, X, XI, XIX and XXI

CPICH_RSCP|_{dBm} ≥ -113 dBm for Band IX,

CPICH_RSCP|_{dBm} ≥ -112 dBm for Bands II, V and VII,

 $CPICH_RSCP|_{dBm} \ge -111 dBm$ for Band III, VIII, XII, XIII, XIV, XX and XXII

 $CPICH_RSCP|_{dBm} \ge -110.5 dBm$ for Band XXV.

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}} - \left(\frac{CPICH_E_c}{I_{or}}\right)_{in\ dB} \le 20dB$$

Table 9.4.1.3-1: UTRA FDD CPICH_Ec/lo absolute accuracy

	_		[dB]			Conditions		
		Normal condition	Extreme conditio	Band I, IV VI, X, XI, XIX and XXI	Band II, V and VII	Band XXV and XXVI	Band III, VIII, XII, XIII, XIV, XX and XXII	Band IX
				lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]	lo [dBm/3,84 MHz]
CPICH_Ec/ d lo	± C - ± C	= 1.5 for -14 ≤ CPICH Ec/lo = 2 for -16 ≤ CPICH Ec/lo < 14 = 3 for -20 ≤ CPICH Ec/lo < 16	± 3	-9450	-9250	-90.550 (Note 1)	-9150	-93 5 0

NOTE 1: The condition is -92...-50 dBm/3.84 MHz when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRAN FDD measurements, the UTRAN FDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.1 shall apply.

The reporting range is for CPICH Ec/Io is from -24 ...0 dB.

In table 9.4.1.3-2 the mapping of measured quantity is defined.

The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.4.1.3-2: UTRA FDD CPICH_Ec/lo measurement report mapping

Reported value	Measured quantity value	Unit
CPICH_Ec/No _00	CPICH Ec/lo < -24	dB
CPICH_Ec/No _01	-24 ≤ CPICH Ec/lo < -23.5	dB
CPICH_Ec/No _02	-23.5 ≤ CPICH Ec/lo < -23	dB
CPICH_Ec/No _47	-1 ≤ CPICH Ec/lo < -0.5	dB
CPICH_Ec/No _48	-0.5 ≤ CPICH Ec/lo < 0	dB
CPICH_Ec/No _49	0 ≤ CPICH Ec/lo	dB

The normative reference for this requirement is TS 25.133 [21] clauses 9.1.2.2.1 and 9.1.2.3 and TS 36.133 [4] clause 9.2.3 and A.9.4.1.

9.4.1.4 Test description

9.4.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. Propagation conditions are set according to Annex B clause B.0.
- 3. Message contents are defined in clause 9.4.1.4.3.
- 4. Cell 1 is the serving cell and Cell 2 is the target cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

9.4.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.4.1.5-2 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ UE\, shall\, transmit\, periodically\, Measurement\, Report\, \, messages.$
- 6. SS shall check UTRA FDD CPICH Ec/Io reported values of Cell 2 in MeasurementReport messages according to Table 9.4.1.5-4.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.4.1.5-2 as appropriate.

9.4.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.4.1.4.3-1: CPICH_Ec/lo measurement configuration

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-7			
elements contents exceptions				

Table 9.4.1.4.3-2: MeasConfig- DEFAULT: CPICH_Ec/lo measurement configuration

Information Element Value/remark Comment Condition	Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:					
measObjectToRemoveList measObjectToAddModList SEQUENCE (SIZE (1.maxObjectId)) OF SEQUENCE (MeasObjectToAddMod SEQUENCE (measObject CHOICE { measObject CHOICE { measObject CHOICE { measObject CHOICE { measObject CHOICE { measObject CHOICE { measObjectId } } } MeasObjectId IdMeasObjectEUTRA- GENERIC(f1) } MeasObjectId IdMeasObject-f2 measObjectId IdMeasObject-f2 measObjectIdTRA MeasObject-f2 measObjectIdTRA MeasObject-f2 measObjectIdTRA MeasObjectUTRA- GENERIC(f2) } } **PreportConfigToRemoveList Mot present reportConfigToAddModList SEQUENCE (SIZE 1 entry 1.maxReportConfigId IdReportConfig-P reportConfigId ReportConfigInterRAT- PERIODICAL **PeriodConfigId PeriodConfigInterRAT- PERIODICAL **MeasIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry 1.maxMeasId) of SEQUENCE (IDME 1 entry 1.maxMeasId)	Information Element	Value/remark	Comment	Condition		
measObjectToAddModList SEQUENCE {						
(1maxObjectId) OF SEQUENCE { MeasObjectToAddMod SEQUENCE { measObject CHOICE { measObject EUTRA	measObjectToRemoveList	Not present				
MeasObjectToAddMod SEQUENCE { IdMeasObject-f1 measObject EUTRA MeasObjectEUTRA-GENERIC(f1) } BenesobjectEUTRA-GENERIC(f1) } BenesobjectToAddMod SEQUENCE { measObjectId IdMeasObject-f2 measObject CHOICE { MeasObjectUTRA-GENERIC(f2) } MeasObjectUTRA-GENERIC(f2) } Jana (Fig. 1) } Jana (Fig. 2)	measObjectToAddModList SEQUENCE (SIZE	2 entry				
MeasObjectToAddMod SEQUENCE { IdMeasObject-f1 measObject EUTRA MeasObjectEUTRA-GENERIC(f1) } BenesobjectEUTRA-GENERIC(f1) } BenesobjectToAddMod SEQUENCE { measObjectId IdMeasObject-f2 measObject CHOICE { MeasObjectUTRA-GENERIC(f2) } MeasObjectUTRA-GENERIC(f2) } Jana (Fig. 1) } Jana (Fig. 2)	(1maxObjectId)) OF SEQUENCE {	,				
measObject CHOICE { measObject EUTRA	MeasObjectToAddMod SEQUENCE {					
measObject CHOICE { measObject EUTRA	meas ObjectId	IdMeasObject-f1				
measObjectToAddMod SEQUENCE { measObjectToAddMod SEQUENCE { measObjectId		,				
measObjectId IdMeasObject-f2 measObject CHOICE { MeasObjectUTRA- measObjectUTRA MeasObjectUTRA- GENERIC(f2) UTRA Cell } } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { 1 entry reportConfigId idReportConfigInterRAT-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { 1 entry measId 1 dMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig QuantityConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present Not present Not present Not present Not present Not present	meas Object EUTRA		E-UTRA Cell			
measObjectId IdMeasObject-f2 measObject CHOICE { MeasObjectUTRA- measObjectUTRA MeasObjectUTRA- GENERIC(f2) UTRA Cell } } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { 1 entry reportConfigId idReportConfigInterRAT-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { 1 entry measId 1 dMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig QuantityConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present Not present Not present Not present Not present Not present	}					
measObjectId IdMeasObject-f2 measObject CHOICE { MeasObjectUTRA- measObjectUTRA MeasObjectUTRA- GENERIC(f2) UTRA Cell } } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { 1 entry reportConfigId idReportConfigInterRAT-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { 1 entry measId 1 dMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig QuantityConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present Not present Not present Not present Not present Not present	}					
measObject CHOICE { MeasObjectUTRA-GENERIC(f2) } UTRA Cell } } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE { 1 entry (1maxReportConfigId))OF SEQUENCE { reportConfigInterRAT-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE { 1 entry (1maxMeasId)) of SEQUENCE { 1 entry measId 1 measObjectId IdMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present						
measObjectUTRA MeasObjectUTRA-GENERIC(f2) } } reportConfigToRemoveList reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId reportConfig		IdMeasObject-f2				
GENERIC(f2) } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfigInterRAT- PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1 entry) (1maxMeasId)) of SEQUENCE (SIZE (1 entry) (1maxMeasId)) of SEQUENCE (IDE (1 entry) (1maxMeasId) idReportConfig-P peasId (1 dMeasObject-f2 (1 entry) quantityConfig QuantityConfig-DEFAULT measGapConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	measObject CHOICE {					
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P reportConfigId ResortConfig-P QuantityConfig- DEFAULT measGapConfig s-Measure Not present Not present Not present	meas ObjectUTRA		UTRA Cell			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P reportConfigId ResortConfig-P QuantityConfig- DEFAULT measGapConfig s-Measure Not present Not present Not present	}					
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P reportConfigId ResortConfig-P QuantityConfig- DEFAULT measGapConfig s-Measure Not present Not present Not present	}					
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P reportConfigId ResortConfig-P QuantityConfig- DEFAULT measGapConfig s-Measure Not present Not present Not present	}					
(1maxReportConfigld))OF SEQUENCE { idReportConfig-P reportConfig ReportConfigInterRAT-PERIODICAL } Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { 1 entry measId 1 measObjectId IdMeasObject-f2 idReportConfig-P reportConfigld idReportConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		Not present				
reportConfigId idReportConfig-P reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId 1 measObjectId IdMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- pEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		1 entry				
reportConfig ReportConfigInterRAT- PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD Rot persent ReportConfigInterRAT- PERIODICAL Not present Not present ReportConfigInterRAT- PERIODICAL Not present						
PERIODICAL PERIODICAL MeasIdToRemoveList						
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P quantityConfig QuantityConfig- measGapConfig s-Measure preRegistrationInfoHRPD 1 entry	reportConfig					
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P quantityConfig QuantityConfig- measGapConfig s-Measure preRegistrationInfoHRPD 1 entry	}					
(1maxMeasId)) of SEQUENCE { 1 measId 1 measObjectId IdMeasObject-f2 reportConfigId idReportConfig-P } QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		Not present				
measId 1 measObjectId IdMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		1 entry				
measObjectId IdMeasObject-f2 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	(1maxMeasId)) of SEQUENCE {	·				
reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		1				
quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present						
DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD DEFAULT MeasGapConfig-GP1 Not present Not present	reportConfigId	idReportConfig-P				
DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD DEFAULT MeasGapConfig-GP1 Not present Not present	}					
measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	quantityConfig					
s-Measure Not present preRegistrationInfoHRPD Not present						
s-Measure Not present preRegistrationInfoHRPD Not present	meas GapConfig	MeasGapConfig-GP1				
preRegistrationInfoHRPD Not present						
	preRegistrationInfoHRPD					
	}	,				

Table 9.4.1.4.3-3: MeasResults: CPICH_Ec/lo measurement configuration

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
meas ResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
meas ResultListUTRA	MeasResultListUTRA		
}			

Table 9.4.1.4.3-4: MeasResultListUTRA: CPICH_Ec/lo measurement configuration

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
Meas Results ListUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	PhysCellIdUTRA-FDD		
tdd	Not Present		
}			
measResult SEQUENCE {			
utra-EcN0	According to specific test		
}			
}			

9.4.1.5 Test requirement

The test parameters are given in Tables 9.4.1.5-1, 9.4.1.5-2 and 9.4.1.5-3 as below. Table, 9.4.1.5-2 and 9.4.1.5-3 define the primary level settings including test tolerances for all tests.

Table 9.4.1.5-1: General test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement	As specified in section A.1.1
		Channel R.0 FDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A. 2.1
parameters		Channel R.6 FDD	
E-UTRAN RF Channel		1	One E-UTRAN FDD carrier frequency is
Number			used.
UTRAN RF Channel		1	One UTRAN FDD carrier frequency is
Number			used.
E-UTRAN Channel	MHz	10	
Bandwidth (BW _{channel})			
Active cell		Cell 1	E-UTRAN cell 1 on RF channel number 1
Neighbour cells		Cell 2	UTRAN cell 2 on RF channel number 1
Gap Pattern Id		0	As specified in 3GPP TS 36.133[4] section
			8.1.2.1.
Inter-RAT (UTR AN FDD)		CPICH Ec/N0	
measurement quantity			
Monitored UTRA FDD cell		12	UTRA cells on UTRA RF channel 1
list size			provided in the cell list.
CP length		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF

Table 9.4.1.5-2: E-UTRAN FDD cell specific test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Test 1	Test 2	Test 3	
E-UTRAN RF Channel Number		1			
BW _{channel}	MHz		10		
OCNG Patterns defined in D.1.1 (OP.1 FDD)			OP.1 FDD		
PBCH_RA	dB				
PBCH_RB	dB				
PSS_RA	dB				
SSS_RA	dB				
PCFICH_RB	dB				
PHICH_RA	dB				
PHICH_RB	dB	0			
PDCCH_RA	dB				
PDCCH_RB	dB				
PDSCH_RA	dB				
PDSCH_RB	dB				
OCNG_RA ^{Note 1}	dB				
OCNG_RB ^{Note 1}	dB				
$N_{oc}^{ m Note~2}$	dBm/15 kHz		-98		
RSRP Note 3	dBm/15 kHz		-94		
\hat{E}_{s}/I_{ot}	dB	4			
SCH_RP ^{Note 3}	dBm/15 kHz	-94			
\hat{E}_s/N_{oc}	dB	4			
Propagation Condition			AWGN		

Note 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.4.1.5-3: UTRAN FDD cell specific test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN FDD

	Parameter		Test 1	Test 2	Test 3
	Parameter	Unit	Cell 2	Cell 2	Cell 2
	CPICH_Ec/lor	dB	-10	-10	-10
F	CCPCH_Ec/lor	dB	-12	-12	-12
	SCH_Ec/lor	dB	-12	-12	-12
	PICH_Ec/lor	dB	-15	-15	-15
	DPCH_Ec/lor	dB	-	-	-
	OCNS_Ec/lor	dB	-0.94	-0.94	-0.94
	Band I, IV, VI, X,				-93.76
	XI, XIX, XXI				
	Band II, V, VII	dBm/			-91.76
loc	Band XXV, XXVI	3.84	-53.12	-87.27	-90.26 (Note 3)
	Band III, VIII, XII,	MHz			-90.76
	XIII, XIV, XX, XXII				00.70
	Band IX (Note 2)				-92.76
	lor/loc	dB	-1.45	-4.4	-9.14
CP	ICH Ec/lo, Note 1	dBm	-13.8	-15.75	-19.64
	Band I, IV, VI, X,				-93.26
	XI, XIX, XXI				
lo,	Band II, V, VII	dBm/			-91.26
Note	Band XXV, XXVI	3.84	-50.77	-85.92	-89.76 (Note 3)
1	Band III, VIII, XII,	MHz			-90.26
	XIII, XIV, XX, XXII				00.20
	Band IX (Note 2)				-92.26
Pro	pagation condition	-	AWGN	AWGN	AWGN

NOTE 1: CPICH Ec/lo and lo levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.

NOTE 2: For the UE which supports both Band III and Band IX operating frequencies, the measurement performance requirements for Band III shall apply to the multi-band UE.

NOTE 3: The test parameter is modified by -1.5 dB when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.

Each UTRAN FDD CPICH Ec/No absolute measurement accuracy test shall meet the reported values test requirements in table 9.4.1.5-4.

Table 9.4.1.5-4: UTRAN FDD CPICH Ec/No absolute measurement accuracy requirements for the reported values

	Test 1	Test 2	Test 3
Nomal Conditions	•		
Lowest reported value	CPICH_Ec/No_17	CPICH_Ec/No_13	CPICH_Ec/No_3
Highest reported value	CPICH_Ec/No_24	CPICH_Ec/No_22	CPICH_Ec/No_16
Extreme Conditions			
Lowest reported value	CPICH_Ec/No_X14	CPICH_Ec/No_11	CPICH_Ec/No_3
Highest reported value	CPICH_Ec/No_27	CPICH_Ec/No_24	CPICH_Ec/No_16

9.4.2 E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute accuracy

Editor's note: This Test case is incomplete for frequencies above 3GHz

- The Test system uncertainties applicable above 3GHz are undefined
- The Test Tolerances and Test Requirements applicable above 3GHz are undefined

9.4.2.1 Test purpose

To verify that the E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute measurement accuracy is within the specified limits.

9.4.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 10 and forward that support UTRA FDD.

9.4.2.3 Minimum conformance requirements

The accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for FDD CPICH Ec/No.

The accuracy requirements in table 9.4.2.3-1 are valid under the following conditions:

CPICH_RSCP|_{dBm} ≥ -114 dBm for Bands I, IV, VI, X, XI, XIX and XXI,

 $CPICH_RSCP|_{dBm} \ge -113 dBm$ for Band IX

 $CPICH_RSCP|_{dBm} \geq -112 \, dBm \ for \ Bands \ II, \ V \ and \ VII,$

 $CPICH_RSCP|_{dBm} \ge -111 dBm$ for Band III, VIII, XII, XIII, XIV and XX,

 $CPICH_RSCP|_{dBm} \ge -110.5 dBm$ for Band XXV.

$$\frac{I_o}{\left(\hat{I}_{or}\right)_{in\ dB}}$$
 - $\left(\frac{CPICH_E_c}{I_{or}}\right)_{in\ dB} \le 20dB$

Table 9.4.2.3-1: UTRAN FDD CPICH_Ec/lo absolute accuracy

Parameter	Unit	Accuracy	/ [dB]			Conditions		
		Normal	Extreme	Band I, IV,	Band II, V and	Band XXV	Band III, VIII,	Band IX
		condition	condition	VI, X, XI, XIX	VII	and XXVI	XII, XIII, XIV,	
				and XXI			XX and XXII	
				lo [dBm/3,84	lo [dBm/3,84	lo [dBm/3,84	lo [dBm/3,84	lo [dBm/3,84
				MHz]	MHz]	MHz]	MHz]	MHz]
CPICH_Ec/lo	dB	± 1.5 for -14	± 3	-9450	-9250	-90.550	-9150	-9350
		≤				(Note 1)		
		CPICH Ec/lo						
		\pm 2 for -16						
		≤						
		CPICH Ec/lo						
		<						
		-14						
		\pm 3 for -20						
		≤						
		CPICH Ec/lo						
		<						
		-16						
NOTE 1: The	cond	dition is -9250	dBm/3.84 N	MHz when the	carrier frequency	y of the assign	ed UTRA char	nel is within

NOTE 1: The condition is -92...-50 dBm/3.84 MHz when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRAN FDD measurements, the UTRAN FDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.1 shall apply.

The reporting range is for CPICH Ec/Io is from -24 ...0 dB.

In table 9.4.2.3-2 the mapping of measured quantity is defined. The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.4.2.3-2: UTRAN FDD CPICH_Ec/lo measurement report mapping

Reported value	Measured quantity value	Unit
CPICH_Ec/No _00	CPICH Ec/lo < -24	dB
CPICH_Ec/No _01	-24 ≤ CPICH Ec/lo < -23.5	dB
CPICH_Ec/No _02	-23.5 ≤ CPICH Ec/lo < -23	dB
CPICH_Ec/No _47	-1 ≤ CPICH Ec/lo < -0.5	dB
CPICH_Ec/No _48	-0.5 ≤ CPICH Ec/lo < 0	dB
CPICH_Ec/No _49	0 ≤ CPICH Ec/lo	dB

The normative reference for this requirement is TS 25.133 [21] clauses 9.1.2.2.1 and 9.1.2.3 and TS 36.133 [4] clause 9.2.3 and A.9.4.2.

9.4.2.4 Test description

9.4.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. The general test parameter settings are set up according to Table 9.4.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.4.2.4.3.
- 5. Cell 1 is the serving E-UTRAN TDD cell and Cell 2 is the target UTRAN FDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.4.2.4.1-1: General test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement	As specified in section A.1.2
		Channel R.0 TDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2
parameters		Channel R.6 TDD	
E-UTRAN RF Channel		1	One E-UTRAN TDD carrier frequency is
Number			used.
UTRAN RF Channel		1	One UTRAN FDD carrier frequency is
Number			used.
E-UTRAN Channel	MHz	10	
Bandwidth (BW _{channel})			
Active cell		Cell 1	E-UTRAN cell 1 on RF channel number 1
Neighbour cells		Cell 2	UTRAN cell 2 on RF channel number 1
Gap Pattern Id		0	As specified in 3GPP TS 36.133 section
			8.1.2.1.
Inter-RAT (UTRAN FDD)		CPICH Ec/N0	
measurement quantity			
Monitored UTRA FDD cell		12	UTRA cells on UTRA RF channel 1
listsize			provided in the cell list.
CP length		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	OFF

9.4.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.4.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check CPICH_Ec/Io reported values of Cell 2 in Measurement Report messages according to Table 9.4.2.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.4.2.5-1 as appropriate.

9.4.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.4.2.4.3-1: MeasConfig- DEFAULT: Additional E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute accuracy test requirement

Information Element	Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:						
measObjectToRemoveList Not present measObjectToAddModList SEQUENCE { 2 entry MeasObjectToAddMod SEQUENCE { IdMeasObjectH measObject CHOICE { IdMeasObjectEUTRA measObject CHOICE { MeasObjectEUTRA- GENERIC(f1) } BeasObjectToAddMod SEQUENCE { measObject CHOICE { MeasObject-f8 measObject CHOICE { MeasObjectUTRA- GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) } JamesobjectUTRA GENERIC(f8) JamesobjectUTRA GENERIC(f8)	Information Element	Value/remark	Comment	Condition			
measObjectToAddModList SEQUENCE { MeasObjectToAddMod SEQUENCE { measObjectChOICE { measObjectChOICE { measObject EUTRA							
(1.maxObjectId)) OF SEQUENCE { MeasObjectToAddMod SEQUENCE { measObject CHOICE { measObject EUTRA	measObjectToRemoveList						
MeasObjectToAddMod SEQUENCE { measObject EUTRA measObjectToAddMod SEQUENCE { measObjectId measObject CHOICE { measObject CHOICE { measObject CHOICE { measObjectUTRA	measObjectToAddModList SEQUENCE (SIZE	2 entry					
measObject CHOICE { measObject EUTRA measObject EUTRA MeasObjectEUTRA- GENERIC(f1) } } MeasObjectToAddMod SEQUENCE { measObjectId measObject CHOICE { measObject CHOICE { measObject CHOICE { measObject CHOICE { measObject OHOICE { indeasObject OHO							
measObject EUTRA MeasObjectEUTRA GENERIC(f1) } MeasObjectToAddMod SEQUENCE { measObjectId measObjectCHOICE { measObjectCHOICE { measObjectUTRA							
measObjectToAddMod SEQUENCE { MeasObjectToAddMod SEQUENCE { measObjectId measObjectCHOICE { measObjectUTRA MeasObjectUTRA MeasObjectUTRA MeasObjectUTRA GENERIC(f8) } } PreportConfigToRemoveList reportConfigToAddModList SEQUENCE { reportConfigId measIdToRemoveList measIdToAddModList SEQUENCE { measId measObjectId reportConfigId re		IdMeasObject-f1					
GENERIC(f1)	measObject CHOICE {						
All	measObject EUTRA		E-UTRA Cell				
measObjectId IdMeasObject-f8 measObject CHOICE { MeasObjectUTRA- measObjectUTRA MeasObjectUTRA-GENERIC(f8) } UTRA Cell } GENERIC(f8) } Image: Ima	}	· · ·					
measObjectId IdMeasObject-f8 measObject CHOICE { MeasObjectUTRA- measObjectUTRA MeasObjectUTRA-GENERIC(f8) } UTRA Cell } GENERIC(f8) } Image: Ima	}						
measObject CHOICE { MeasObjectUTRA measObjectUTRA MeasObjectUTRA-GENERIC(f8) } J } J reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1.maxReportConfigId))OF SEQUENCE { 1 entry reportConfigId idReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1.maxMeasId)) of SEQUENCE { 1 entry (1.maxMeasId)) of SEQUENCE { 1 dMeasObject-f8 reportConfigId idReportConfig-P 1 entry QuantityConfig-DEFAULT DEFAULT measGapConfig QuantityConfig-DEFAULT measGapConfig Not present preRegistrationInfoHRPD Not present	MeasObjectToAddMod SEQUENCE {						
measObject CHOICE { MeasObjectUTRA measObjectUTRA MeasObjectUTRA-GENERIC(f8) } J } J reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1.maxReportConfigId))OF SEQUENCE { 1 entry reportConfigId idReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1.maxMeasId)) of SEQUENCE { 1 entry (1.maxMeasId)) of SEQUENCE { 1 dMeasObject-f8 reportConfigId idReportConfig-P 1 entry QuantityConfig-DEFAULT DEFAULT measGapConfig QuantityConfig-DEFAULT measGapConfig Not present preRegistrationInfoHRPD Not present		IdMeasObject-f8					
GENERÍC(f8) } } reportConfigToRemoveList Not present reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfigEUTRA- perioDical } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE (1maxMeasId) of SEQUENCE (SIZE measId 1 Intry (1maxMeasId) of SEQUENCE (IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig DEFAULT measGapConfig s-MeasGapConfig-GP1 s-Measure preRegistrationInfoHRPD Not present		·					
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		MeasObjectUTRA- GENERIC(f8)	UTRA Cell				
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	}						
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	}						
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	}						
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE { reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA-PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	reportConfigToRemoveList	Not present					
reportConfigId idReportConfig-P reportConfig ReportConfigEUTRA- PERIODICAL } measIdToRemoveList Not present measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId 1 measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- pEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present							
reportConfig ReportConfigEUTRA- PERIODICAL } measIdToRemoveList measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD Rot period (SIZE) ReportConfigEUTRA- PERIODICAL ReportConfigEUTRA- PERIODICAL ReportConfige 1 entry 1 entry 1 entry 1 entry 1 entry 2 untry 1 entry 1 entry 2 untry 1 measObject-f8 2 idReportConfig-P 3 equantityConfig- DEFAULT MeasGapConfig-GP1 S-Measure Not present Not present							
PERIODICAL PERIODICAL PERIODICAL MeasIdToRemoveList Mot present 1 entry (1maxMeasId)) of SEQUENCE (SIZE measId measObjectId reportConfigId reportConfigId quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD Not present Not present	reportConfigId	idReportConfig-P					
measIdToRemoveList measIdToAddModList SEQUENCE (SIZE 1 entry (1maxMeasId)) of SEQUENCE { measId 1 measObjectId reportConfigId } quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD Not present Not present	reportConfig						
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD lentry 1 entry ldMeasObject-f8 idReportConfig-P ldMeasObject-f8	}	1 2111021072					
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE { measId measObjectId reportConfigId idMeasObject-f8 reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig s-Measure preRegistrationInfoHRPD lentry 1 entry ldMeasObject-f8 idReportConfig-P ldMeasObject-f8	measIdToRemoveList	Notpresent					
(1maxMeasId)) of SEQUENCE { measId 1 measObjectId IdMeasObject-f8 reportConfigId idReportConfig-P } QuantityConfig-DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present							
meas Id 1 meas ObjectId IdMeas Object-f8 reportConfigId idReportConfig-P } QuantityConfig-DEFAULT meas GapConfig Meas GapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		,					
reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		1					
reportConfigId idReportConfig-P } quantityConfig QuantityConfig- DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present	meas ObjectId	IdMeasObiect-f8					
quantityConfig QuantityConfig- DEFAULT measGapConfig S-Measure preRegistrationInfoHRPD QuantityConfig- DEFAULT MeasGapConfig-GP1 Not present Not present							
DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure preRegistrationInfoHRPD Not present Not present	}						
DEFAULT measGapConfig MeasGapConfig-GP1 s-Measure preRegistrationInfoHRPD Not present Not present	quantityConfig	QuantityConfig-					
measGapConfig MeasGapConfig-GP1 s-Measure Not present preRegistrationInfoHRPD Not present		DEFAULT					
s-Measure Not present preRegistrationInfoHRPD Not present	meas GapConfig	MeasGapConfig-GP1					
preRegistrationInfoHRPD Not present		Not present					
	preRegistrationInfoHRPD	Not present					
}							
	}						

Table 9.4.2.4.3-2: MeasResults: Additional E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
m e as ResultListUTRA	MeasResultListUTRA		
}			
•			

Table 9.4.2.4.3-3: MeasResultListUTRA: Additional E-UTRAN TDD - UTRA FDD CPICH Ec/No absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5						
Information Element	Value/remark	Comment	Condition			
MeasResultsListEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {						
physCellId CHOICE {						
fdd	Phys CellidUTRA-FDD					
tdd	Not Present					
}						
measResult SEQUENCE {						
utra-EcN0	According to specific test					
}						
}						

9.4.2.5 Test requirement

The test parameters are given in Tables 9.4.2.4.1-1, 9.4.2.5-1 and 9.4.2.5-2 as below. Table 9.4.2.5-1 and 9.4.2.5-2 define the primary level settings including test tolerances for all tests.

Each UTRAN FDD CPICH Ec/No absolute measurement accuracy test shall meet the reported values test requirements in table 9.4.2.5-3.

Table 9.4.2.5-1: E-UTRAN TDD cell specific test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Test 1	Test 2	Test 3
E-UTRAN RF Channel Number			1	
BWchannel	MHz		10	
Special subframe configuration Notes			6	
Uplink-downlink configuration Note 1			1	
OCNG Patterns defined in D.2.1 (OP.1 TDD)			OP.1 TDD	
PBCH_RA	dB			
PBCH_RB	dB			
PSS_RA	dB			
SSS_RA	dB			
PCFICH_RB	dB			
PHICH_RA	dB			
PHICH_RB	dB	0		
PDCCH_RA	dB			
PDCCH_RB	dB			
PDSCH_RA	dB			
PDSCH_RB	dB			
OCNG_RA ^{Note 2}	dB			
OCNG_RB ^{Note 2}	dB			
$N_{oc}^{$	dBm/15 kHz		-98	
RSRP Note 4	dBm/15 kHz		-94	
\hat{E}_{s}/I_{ot}	dB	4		
SCH_RP Note 4	dBm/15 kHz	-94		
\hat{E}_s/N_{oc}	dB	4		
Propagation Condition	Endouder Endo		AWGN	

Note 1: For special subframe and uplink-downlink configurations see Tables 4.2-1 and 4.2-2 in 3GPP TS 36.211.

Note 2: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 3: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 4: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.4.2.5-2: UTRAN FDD cell specific test parameters for UTRAN FDD CPICH Ec/No absolute measurement accuracy test in E-UTRAN TDD

Parameter		Unit	Test 1	Test 2	Test 3
	rarameter	Offic	Cell 2	Cell 2	Cell 2
	CPICH_Ec/lor		-10	-10	-10
F	PCCPCH_Ec/lor	dB	-12	-12	-12
	SCH_Ec/lor	dB	-12	-12	-12
	PICH_Ec/lor	dB	-15	-15	-15
	DPCH_Ec/lor	dB	-	-	-
	OCNS_Ec/lor	dB	-0.94	-0.94	-0.94
	Band I, IV, VI, X,				-93.76
	Band II, V, VII, XI	dBm/			-91.76
loc	Band XXV, XXVI	3.84	-53.12	-87.27	-90.26 (Note 3)
	Band III, VIII, XII,	MHz			-90.76
	XIII, XIV, XXII Band IX (Note 2)	-			-92.76
	lor/loc	dB	-1.45	-4.4	-9.14
CP	PICH Ec/lo, Note 1	dBm	-13.8	-15.75	-19.64
	Band I, IV, VI, X, XIX				-93.26
lo,	Band II, V, VII, XI	dBm/			-91.26
Note	Band XXV, XXVI	3.84	-50.77	-85.92	-89.76 (Note 3)
1	Band III, VIII, XII,	MHz			-90.26
	XIII, XIV, XXII				
	Band IX (Note 2)				-92.26
Pro	pagation condition	-	AWGN	AWGN	AWGN

NOTE 1: CPICH Ec/lo and lo levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.

Table 9.4.2.5-3: UTRAN FDD CPICH Ec/No absolute measurement accuracy requirements for the reported values

	Test 1	Test 2	Test 3
Nomal Conditions			
Lowest reported value	CPICH_Ec/No_17	CPICH_Ec/No_13	CPICH_Ec/No_3
Highest reported value	CPICH_Ec/No_24	CPICH_Ec/No_22	CPICH_Ec/No_16
Extreme Conditions			
Lowest reported value	CPICH_Ec/No_14	CPICH_Ec/No_11	CPICH_Ec/No_3
Highest reported value	CPICH_Ec/No_27	CPICH_Ec/No_24	CPICH_Ec/No_16

9.5 UTRAN TDD P-CCPCH RSCP

9.5.1 E-UTRAN FDD – UTRA TDD P-CCPCH RSCP absolute accuracy

9.5.1.1 Test purpose

To verify that the UTRAN TDD P-CCPCH RSCP absolute measurement accuracy is within the specified limits.

9.5.1.2 Test applicability

This test applies to all types of E-UTRA FDD UE release 9 and forward that support UTRA TDD.

NOTE 2: For the UE which supports both Band III and Band IX operating frequencies, the measurement performance requirements for Band III shall apply to the multi-band UE.

NOTE 3: The test parameter is modified by -1.5 dB when the carrier frequency of the assigned UTRA channel is within 869-894 MHz for the UE which supports both Band V and Band XXVI operating frequencies.

Tests shall be done sequentially. Test 1 shall be done first. After test 1 has been executed test parameters for tests 2 and 3 shall be set within 5 seconds so that UE does not loose the Cell 2 in between the tests.

9.5.1.3 Minimum conformance requirements

In RRC_CONNECTED state the accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for URANTDD P-CCPCH RSCP in 3GPPTS 25.123 [22].

The accuracy requirements in table 9.5.1.3-1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm

P-CCPCH Ec/Io > -8 dB

 $DwPCH_Ec/Io > -5 dB$

Table 9.5.1.3-1: UTRAN TDD P-CCPCH absolute accuracy

	Unit	Accuracy [dB]		Conditions
Parameter		Normal condition	Extreme condition	lo [dBm/1.28 MHz]
P-CCPCH_RSCP	dBm	± 6	± 9	-9470
	dBm	± 8	± 11	-7050

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRANTDD measurements, the UTRANTDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.3 shall apply.

The reporting range is for URAN TDD P-CCPCH RSCP is from -115 ...-25 dBm.

In table 9.5.1.3-2 the mapping of measured quantity is defined.

The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.5.1.3-2: UTRAN TDD P-CCPCH absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
P-CCPCH RSCP_LEV05	P-CCPCH RSCP <-120	dBm
P-CCPCH RSCP_LEV04	-120 ≤ P-CCPCH RSCP < -119	dBm
P-CCPCH RSCP_LEV03	-119 ≤ P-CCPCH RSCP < -118	dBm
	•••	
PCCPCH_RSCP_LEV_89	-27 ≤ PCCPCH RSCP< -26	dBm
PCCPCH_RSCP_LEV_90	-26 ≤ PCCPCH RSCP< -25	dBm
PCCPCH_RSCP_LEV_91	-25 ≤ PCCPCH RSCP	dBm

The normative reference for this requirement is TS 25.123 [22] clause 9.1.1.1.1.2, clause 9.1.1.1.3 and TS 36.133 [4] clause 9.3.1 and A.9.5.1.

9.5.1.4 Test description

9.5.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. The general test parameter settings are set up according to Table 9.5.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.5.1.4.3.

5. Cell 1 is the serving E-UTRAN FDD cell and Cell 2 is the target UTRAN TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.5.1.4.1-1: General test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 FDD	As specified in section A.1.1
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement Channel R.6 FDD	As specified in section A.2.1
E-UTRAN RF Channel Number		1	One E-UTRAN FDD carrier frequency is used.
UTRAN RF Channel Number		2	One UTRAN TDD carrier frequency is used.
E-UTRAN Channel Bandwidth (BWchannel)	MHz	10	
Active cell		Cell 1	E-UTRA FDD cell1 on RF channel number 1
Neighbour cell		Cell 2	1.28Mcps UTRATDD Cell2 on RF channel number 2
Gap Pattern Id		1	As specified in 3GPP TS 36.133 [4] section 8.1.2.1.
CP length of cell 1		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
Inter-RAT (UTR AN TDD) measurement quantity		P-CCPCH RSCP	

9.5.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.5.1.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check P-CCPCH RSCP reported values of Cell 2 in MeasurementReport messages according to Table 9.5.1.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.5.1.5-1 as appropriate.

9.5.1.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.5.1.4.3-1: Common Exception messages for E-UTRAN FDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			

Table 9.5.1.4.3-2: MeasConfig- DEFAULT: Additional E-UTRAN FDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:				
Information Element	Value/remark	Comment	Condition	
MeasConfig-DEFAULT ::= SEQUENCE {				
measObjectToRemoveList	Not present			
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	2 entry			
MeasObjectToAddMod SEQUENCE {				
m eas ObjectId	IdMeasObject-f1			
measObject CHOICE {				
meas Object EUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell		
}				
}				
MeasObjectToAddMod SEQUENCE {				
m eas ObjectId	IdMeasObject-f2			
measObject CHOICE {				
meas ObjectUTRA	MeasObjectUTRA- GENERIC(f2)	UTRA Cell		
}				
}				
}				
reportConfigToRemoveList	Not present			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry			
reportConfigld	idReportConfig-P			
reportConfig	ReportConfigInterRAT- PERIODICAL			
}				
m e as IdToRem o ve List	Not present			
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry			
measld	1			
meas ObjectId	IdMeasObject-f2			
reportConfigId	idReportConfig-P			
}				
quantityConfig SEQUENCE {				
quantityConfigUTRA SEQUENCE {			UTRAN	
measQuantityUTRA-TDD	pccpch-RSCP			
}				
}				
meas Gap Config	MeasGapConfig-GP2			
s-Measure	Not present			
preRegistrationInfoHRPD	Not present			
speedStatePars	Not present			
}				

Table 9.5.1.4.3-3: *MeasResults*: Additional E-UTRAN FDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
measResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
meas ResultListUTRA	MeasResultListUTRA		
}			
}			

Table 9.5.1.4.3-4: MeasResultListUTRA: Additional E-UTRAN FDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas Results ListUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	Not Present		
tdd	PhysCellIdUTRA-TDD		
}			
measResult SEQUENCE {			
utra-RSCP	Set according to specific		
	test INTEGER (-591)		
}			
}			

9.5.1.5 Test requirement

The test parameters are given in Tables 9.5.1.4.1-1, 9.5.1.5-1 and 9.5.1.5-2 as below. Table 9.5.1.5-2 and 9.5.1.5-3 define the primary level settings including test tolerances for all tests.

Table 9.5.1.5-1: E-UTRAN FDD cell specific test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Test 1 Test 2 Test 3
E-UTRARF Channel Number		1
BWchannel	MHz	10
OCNG Patterns defined in D.1.1 (OP.1		OP.1 FDD
FDD)		OF.1 FDD
PBCH_RA		
PBCH_RB		
PSS_RA		
SSS_RA		
PCFICH_RB		
PHICH_RA		
PHICH_RB	dB	0
PDCCH_RA		
PDCCH_RB		
PDSCH_RA		
PDSCH_RB		
OCNG_RA ^{NOTE 1}		
OCNG_RB ^{NOTE1}		
$N_{oc}^{ m Note2}$	dBm/15 kHz	-98
\hat{E}_s / I_{ot}	dB	4
RSRP ^{NOIES}	dBm/15 kHz	-94
lo ^{Note3}	dBm/9 MHz	-64.76
\hat{E}_s / N_{oc}	dB	4
Propagation condition	-	AWGN

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.5.1.5-2: UTRAN TDD cell specific test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN FDD

Parameter	Unit	Test 1		Tes	st 2	Tes	st 3
DL timeslot number		0	DwPTS	0	DwPTS	0	DwPTS
UTRARF Channel number Note2		Char	nel 2	Channel 2		Channel 2	
PCCPCH_Ec/lor	dB	-3		-3		-3	
DwPCH_Ec/lor	dB		0		0		0
OCNS_Ec/lor	dB	-3		-3		-3	
loc	dBm/1.28MHz	-5·	4.9	-7:	5.2	-9	6.8
Îor/loc	dB	2	2	;	5	()
PCCPCH RSCP NOTET	dBm	-55.9		-73.2		-99.2	
lo Note 1	dBm/1.28MHz	-50	.78	-69	0.01	-93	.19
Propagation condition		AWGN					

Note 1: PCCPCH RSCP and lo levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.

Note 2: In the case of multi-frequency network of 1.28 Mcps TDD, the UTRA RF Channel Number can be set for the primary frequency in this test.

Each UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test shall meet the reported values test requirements in table 9.5.1.5-3.

Table 9.5.1.5-3: UTRAN TDD P-CCPCH RSCP absolute measurement accuracy requirements for the reported values

	Test 1	Test 2	Test 3			
Nomal Conditions						
	P-CCPCH RSCP_LEV_51		P-CCPCH RSCP_LEV 10			
Highest reported value (Cell 2)	P-CCPCH RSCP_LEV_68	P-CCPCH RSCP_LEV51	P-CCPCH RSCP_LEV 23			
	Extreme Conditions					
Lowest reported value (Cell 2)	P-CCPCH RSCP_LEV_48		P-CCPCH RSCP_LEV 07			
Highest reported value (Cell 2)	P-CCPCH RSCP_LEV_71	P-CCPCH RSCP_LEV 54	P-CCPCH RSCP_LEV 26			

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.5.2 E-UTRAN TDD – UTRA TDD P-CCPCH RSCP absolute accuracy

9.5.2.1 Test purpose

To verify that the UTRAN TDD P-CCPCH RSCP absolute measurement accuracy is within the specified limits.

9.5.2.2 Test applicability

This test applies to all types of E-UTRA TDD UE release 9 and forward that support UTRA TDD.

9.5.2.3 Minimum conformance requirements

In RRC_CONNECTED state the accuracy requirements shall be the same as the inter-frequency measurement accuracy requirements for URANTDD P-CCPCH RSCP in 3GPPTS 25.123 [22].

The accuracy requirements in table 9.5.2.3-1 are valid under the following conditions:

P-CCPCH RSCP ≥ -102 dBm

P-CCPCH Ec/Io \geq -8 dB

 $DwPCH_Ec/Io \ge -5 dB$

Table 9.5.2.3-1: UTRAN TDD P-CCPCH absolute accuracy

		Accuracy [dB] Normal condition Extreme condition		Conditions
Parameter	Unit			lo [dBm/1.28 MHz]
P-CCPCH RSCP	dBm	± 6	± 9	-9470
1-001-011_1(001	dBm	± 8	± 11	-7050

If the UE, in RRC_CONNECTED state, needs measurement gaps to perform UTRAN TDD measurements, the UTRAN TDD measurement procedure and measurement gap pattern stated in TS 36.133 [4] clause 8.1.2.4.3 shall apply.

The reporting range is for URAN TDD P-CCPCH RSCP is from -115 ...-25 dBm.

In table 9.5.2.3-2 the mapping of measured quantity is defined.

The range in the signalling may be larger than the guaranteed accuracy range.

Table 9.5.2.3-2: UTRAN TDD P-CCPCH absolute accuracy measurement report mapping

Reported value	Measured quantity value	Unit
PCCPCH_RSCP_LEV -05	P-CCPCH RSCP <-120	dBm
PCCPCH_RSCP_LEV-04	-120 ≤ P-CCPCH RSCP < -119	dBm
PCCPCH_RSCP_LEV-03	-119 ≤ P-CCPCH RSCP < -118	dBm
	•••	
PCCPCH_RSCP_LEV_89	-27 ≤ PCCPCH RSCP< -26	dBm
PCCPCH_RSCP_LEV_90	-26 ≤ PCCPCH RSCP< -25	dBm
PCCPCH_RSCP_LEV_91	-25 ≤ PCCPCH RSCP	dBm

The normative reference for this requirement is TS 25.123 [22] clause 9.1.1.1.1.2, clause 9.1.1.1.3 and TS 36.133 [4] clause 9.3.1 and A.9.5.2.

9.5.2.4 Test description

9.5.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.22.
- 2. The general test parameter settings are set up according to Table 9.5.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.5.2.4.3.
- 5. Cell 1 is the serving E-UTRAN TDD cell and Cell 2 is the target UTRAN TDD cell. Cell 1 is the cell used for connection setup with the power levels set according to Annex C.0 and C.1 for this test.

Table 9.5.2.4.1-1: General test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement Channel R.0 TDD	As specified in section A.1.2
PCFICH/PDCCH/PHICH parameters		DL Reference Measurement Channel R.6 TDD	As specified in section A.2.2
E-UTRAN RF Channel Number		1	One E-UTRAN TDD carrier frequency is used.
UTRAN RF Channel Number		2	One UTRAN TDD carrier frequency is used.
E-UTRAN Channel Bandwidth (BWchannel)	MHz	10	
Active cell		Cell 1	E-UTRATDD cell1 on RF channel number 1
Neighbour cell		Cell 2	1.28Mcps UTRATDD Cell2 on RF channel number 2
Gap Pattern Id		1	As specified in 3GPP TS 36.133 [4] section 8.1.2.1.
Uplink-downlink configuration of cell 1		1	As specified in table 4.2.2 in TS 36.211 [9]
Special subframe configuration of cell 1		6	As specified in table 4.2.1 in TS 36.211 [9]
CP length of cell 1		Nomal	
Filter coefficient		0	L3 filtering is not used
DRX		OFF	
Time offset between cells	ms	3	Asynchronous cells
Inter-RAT (UTR AN TDD) measurement quantity		P-CCPCH RSCP	

9.5.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.5.2.5-1 as appropriate. Propagation conditions are set according to Annex B clause B.1.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message on Cell 1.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- 5. UE shall transmit periodically Measurement Report messages.
- 6. SS shall check P-CCPCH RSCP reported values of Cell 2 in MeasurementReport messages according to Table 9.5.2.5-3.
- 7. SS shall check the Measurement Report message transmitted by the UE until the confidence level according to Tables G.2.3-1 in Annex G.2 is achieved.
- 8. Repeat step 1-7 for each sub-test in Table 9.5.2.5-1 as appropriate.

9.5.2.4.3 Message contents

Message contents are according to TS 36.508 [7] clause 4.6 with the following exceptions:

Table 9.5.2.4.3-1: Common Exception messages for E-UTRAN TDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			

Table 9.5.2.4.3-2: MeasConfig- DEFAULT: Additional E-UTRAN TDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 Meas Config-DEFAULT:				
Information Element	Value/remark	Comment	Condition	
MeasConfig-DEFAULT ::= SEQUENCE {				
meas ObjectToRemoveList	Not present			
measObjectToAddModList SEQUENCE (SIZE	2 entry			
(1maxObjectId)) OF SEQUENCE {				
MeasObjectToAddMod SEQUENCE {				
m eas ObjectId	ldMeasObject-f1			
measObject CHOICE {				
meas Object EUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell		
}				
}				
MeasObjectToAddMod SEQUENCE {				
meas ObjectId	IdMeasObject-f2			
measObject CHOICE {				
meas ObjectUTRA	MeasObjectUTRA- GENERIC(f2)	UTRA Cell		
}				
}				
}				
reportConfigToRemoveList	Not present			
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry			
reportConfigId	idReportConfig-P			
reportConfig	ReportConfigInterRAT- PERIODICAL			
}				
measIdToRemoveList	Not present			
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry			
measld	1			
meas ObjectId	IdMeasObject-f2			
reportConfigId	idReportConfig-P			
}				
quantityConfig SEQUENCE {				
quantityConfigUTRA SEQUENCE {			UTRAN	
measQuantityUTRA-TDD	pccpch-RSCP			
}				
}				
meas Gap Config	MeasGapConfig-GP2			
s-Measure	Not present			
preRegistrationInfoHRPD	Not present			
speedStatePars	Not present			
}				

Table 9.5.2.4.3-3: *MeasResults*: Additional E-UTRAN TDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Derivation Path: 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measld	1		
meas ResultServCell			
rsrpResult	INTEGER(097)		
rsrqResult	INTEGER(034)		
}			
measResultNeighCells CHOICE {			
m eas ResultListUTRA	MeasResultListUTRA		
}			
}			

Table 9.5.2.4.3-4: MeasResultListUTRA: Additional E-UTRAN TDD - UTRA TDD P-CCPCH RSCP absolute accuracy test requirement

Information Element	Value/remark	Comment	Condition
Meas Results ListUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
physCellId CHOICE {			
fdd	Not Present		
tdd	PhysCellIdUTRA-TDD		
}			
measResult SEQUENCE {			
utra-RSCP	Set according to specific		
	test INTEGER (-591)		
}			
}			

9.5.2.5 Test requirement

The test parameters are given in Tables 9.5.2.4.1-1, 9.5.2.5-1 and 9.5.2.5-2 as below. Table 9.5.2.5-2 and 9.5.2.5-3 define the primary level settings including test tolerances for all tests.

Table 9.5.2.5-1: E-UTRAN TDD cell specific test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Test 1 Test 2 Test 3
E-UTRARF Channel Number		1
BWchannel	MHz	10
OCNG Patterns defined in D.2.1 (OP.1		OP.1 TDD
TDD)		OF.1 100
PBCH_RA		
PBCH_RB		
PSS_RA		
SSS_RA		
PCFICH_RB		
PHICH_RA		
PHICH_RB	dB	0
PDCCH_RA		
PDCCH_RB		
PDSCH_RA		
PDSCH_RB		
OCNG_RA ^{Note1}		
OCNG_RB ^{NOte1}		
$N_{oc}^{ m Note2}$	dBm/15 kHz	-98
\hat{E}_s / I_{ot}	dB	4
RSRP ^{Notes}	dBm/15 kHz	-94
Io ^{Note3}	dBm/9 MHz	-64.76
\hat{E}_s/N_{oc}	dB	4
Propagation condition	-	AWGN

Note 1: OCNG shall be used such that both cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 3: RSRP and lo levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Note 4: RSRP minimum requirements are specified assuming independent interference and noise at each receiver antenna port.

Table 9.5.2.5-2: UTRAN TDD cell specific test parameters for UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test in E-UTRAN TDD

Parameter	Unit	Tes	st 1	Tes	st 2	Tes	st 3
DL timeslot number		0	DwPTS	0	DwPTS	0	DwPTS
UTRARF Channel number Note2		Char	nel 2	Char	nel 2	Char	nel 2
PCCPCH_Ec/lor	dB	-3		-3		-3	
DwPCH_Ec/lor	dB		0		0		0
OCNS_Ec/lor	dB	-3		-3		-3	
loc	dBm/1.28MHz	-54	4.9	-7:	5.2	-90	6.2
Îor/loc	dB	2	2	į.	5	()
PCCPCH RSCP NOTE!	dBm	-55.9		-73.2		-99.2	
lo Note 1	dBm/1.28MHz	-50	.78	-69	0.01	-93	.19
Propagation condition				AW	GN		

Note 1: PCCPCH RSCP and lo levels have been calculated from other parameters for information purposes. They are not settable parameters themselves.

Note 2: In the case of multi-frequency network of 1.28 Mcps TDD, the UTRA RF Channel Number can be set for the primary frequency in this test.

Each UTRAN TDD P-CCPCH RSCP absolute measurement accuracy test shall meet the reported values test requirements in table 9.5.2.5-3.

Table 9.5.2.5-3: UTRAN TDD P-CCPCH RSCP absolute measurement accuracy requirements for the reported values

	Test 1	Test 2	Test 3		
	Normal Conditions				
	P-CCPCH RSCP_LEV_51				
Highest reported value (Cell 2)	P-CCPCH RSCP_LEV_68	P-CCPCH RSCP_LEV51	P-CCPCH RSCP_LEV 23		
Extreme Conditions					
Lowest reported value (Cell 2)	P-CCPCH RSCP_LEV_48	P-CCPCH RSCP_LEV31	P-CCPCH RSCP_LEV 07		
Highest reported value (Cell 2)	P-CCPCH RSCP_LEV_71	P-CCPCH RSCP_LEV 54	P-CCPCH RSCP_LEV 26		

For the test to pass, the ratio of successful reported values in each test shall be more than 90% with a confidence level of 95%.

9.6 GSM carrier RSSI

9.6.1 GSM RSSI accuracy for E-UTRAN FDD

9.6.1.1 Test purpose

To verify that the GSM RSSI measurement accuracy is within the specified limits.

9.6.1.2 Test applicability

This test applies all the types of E-UTRA FDD UE release 9 and forward that support GSM. Applicability requires support for FGI 16 and bit 23.

9.6.1.3 Minimum conformance requirements

Absolute accuracy

The R.M.S received signal level at the receiver input shall be measured by the MS and the BSS over the full range of -110 dBm to -48 dBm with an absolute accuracy of ± 4 dB from -110 dBm to -70 dBm under normal conditions and ± 6 dB over the full range under both normal and extreme conditions. The R.M.S received signal level at the receiver input shall be measured by the MS above -48 dBm up to -38 dBm with an absolute accuracy of ± 9 dB under both normal and extreme conditions.

This requirement is summarized in Table 9.6.1.3-1.

Table 9.6.1.3-1: GSM RXLEV absolute accuracy

Parameter	Unit	Accura	ıcy [dB]	Conditions
Farameter	Offic	Normal condition	Extreme condition	Input level dBm
	dBm	± 4	± 6	-11070
RXLEV	dBm	± 6	± 6	-7048
	dBm	± 9	± 9	-4838

The reporting range and mapping for RXLEV is summarized in Table 9.6.1.3-2.

Table 9.6.1.3-2: GSM RSSI measurement report mapping

Reported value	Measured quantity value	Unit
RXLEV_00	RXLEV < -110	dBm
RXLEV_01	-110 ≤ RXLEV < -109	dBm
RXLEV_02	-109 ≤ RXLEV < -108	dBm
RXLEV_61	-50≤ RXLEV < -49	dBm
RXLEV_62	-49 ≤ RXLEV < -48	dBm
RXLEV_63	-48 ≤ RXLEV	dBm

Relative accuracy

The relative accuracy shall be as follows:

If signals of level x1 and x2 dBm are received (where x1 \leq x2) and levels y1 and y2 dBm respectively are measured, if x2 - x1 < 20 dB and x1 is not below the reference sensitivity level, then y1 and y2 shall be such that:

 $(x2 - x1) - a \le y2 - y1 \le (x2 - x1 + b)$ if the measurements are on the same or on different RF channel within the same frequency band;

and

 $(x2 - x1) - c \le y2 - y1 \le (x2 - x1 + d)$ if the measurements are on different frequency bands:

a, b, c and d are in dB and depend on the value of x1 as follows:

	<u>a</u>	b	<u>C</u>	d
$x1 \ge s+14$, $x2 < -48$ dBm	2	2	4	4
s+14 > x1 ≥ s+1	3	2	5	4
s+1 > x1	4	2	6	4

For single band MS and measurements between ARFCN in the same band for a multiband MS:

s = reference sensitivity level as specified in Table 9.6.1.3-3 (normative reference 3GPP TS 45.005 [16] Table 6.2-1a)

For measurements between ARFCN in different bands:

s = the reference sensitivity level as specified in Table 9.6.1.3-3 (normative reference 3GPP TS 45.005 [16] Table 6.2-1a) for the band including x1.

Table 9.6.1.3-3: Reference sensitivity level for MS

GSM 400 MS	for GSM 400 small MS	-102 dBm		
	for other GSM 400 MS	-104 dBm		
GSM 900 MS	for GSM 900 small MS	-102 dBm		
	for other GSM 900 MS	-104 dBm		
GSM 850 MS	for GSM 850 small MS	-102 dBm		
	for other GSM 850 MS	-104 dBm		
GSM 700 MS	for GSM 700 small MS	-102 dBm		
	for other GSM 700 MS	-104 dBm		
DCS 1 800 MS	for DCS 1 800 class 1 or class 2 MS	-100 / -102 dBm *		
	for DCS 1 800 class 3 MS	-102 dBm		
PCS 1 900 MS	for PCS 1 900 class 1 or class 2 MS	-102 dBm		
	for other PCS 1 900 MS	-104 dBm		
Note: For DCS 1 800 class 1 and class 2 MS, the 102 dBm level shall apply for the				
reference sensitivity performance as specified in table 1 for the normal				
conditions defined in TS 45.005 [16] Annex D and 100 dBm level shall be				
used to determine all other MS performances.				

The normative reference for this requirement is:

For E-UTRA: TS 36.133 [4] clause 9.4.1 and A.9.6.1

For GSM: TS 45.008 [15] clause 8.1.2 and 8.1.4 and TS 45.005 [16].

9.6.1.4 Test description

9.6.1.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AW GN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. The general test parameter settings are set up according to Table 9.6.1.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.6.1.4.3.
- 5. There is one E-UTRA TDD cell (Cell 1) and two GSM cells (Cell 2 and Cell 3) specified in each test. Cell 1 is the cell used for call setup with the power level set according to Annex C.0 and C.1 for this test. Cell 2 (BCCH1) and Cell 3 (BCCH other than BCCH1 according to sub-test) are measured and reported by the UE.

Parameter Unit Value Comment PDSCH parameters DL Reference Measurement Channel As specified in section A.1.1. (E-UTRAN FDD) R.0 FDD PCFICH/PDCCH/PHICH DL Reference Measurement Channel As specified in section A.2.1. R.6 FDD parameters . (E-UTRAN FDD) Active cell Cell 1 DRX OFF As specified in 3GPP TS 36.133 [4] Gap pattern Id section 8.1.2.1. Filtering coefficient L3 filtering is not used. Inter-RAT measurement **GSM Carrier RSSI** quantity Monitored cell list size Included in the Measurement 6 GSM neighbours including ARFCN 1 control information

Table 9.6.1.4.1-1: General GSM Carrier RSSI test parameters

9.6.1.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.6.1.5-1, 9.6 1.5-2 and 9.6 1.5-3 as appropriate. Propagation conditions for the E-UTRA cell are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ UE\, shall\, transmit\, periodically\, Measurement\, Report\, \, messages.$
- 6. SS shall check the reported GSM RSSI values in MeasurementReport messages. The reported RSSI value for Cell 2 is compared to the actual RSSI value according to Table 9.6.1.5-4. This counts as a Pass or Fail for the event "Absolute". Also the reported RSSI value for Cell 3 is compared to the reported RSSI value for Cell 2 for each MeasurementReport message according to Table 9.6.1.5-5. This counts as a Pass or Fail for the event "Relative".

- 7. The SS shall check the MeasurementReport messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved for each of the events "Absolute" and "Relative". Each event is evaluated only until the confidence level is achieved. Different events may require different times for a verdict.
- 8. Repeat step 1-7 for each sub-test in Table 9.6.1.5-2 as appropriate.

9.6.1.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.6.1.4.3-1: Common Exception messages for GSM RSSI measurement accuracy test requirement

Default Message Contents		
Common contents of system information		
blocks exceptions		
Default RRC messages and information	Table H.3.1-1	
elements contents exceptions	Table H.3.1-7	
·	Table H.3.1-11	

Table 9.6.1.4.3-2: MeasuredResults: Additional GSM RSSI measurement accuracy test requirement

Information Element	Value/remark	Comment	Condition
VleasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult	RSRP-Range	Set according to specific test	
rsrqResult	RSRQ-Range	Set according to specific test	
measResultNeighCells CHOICE {			
MeasResultListGERAN	MeasResultListGERAN		
}			

Table 9.6.1.4.3-3: MeasResultListGERAN: Additional GSM measurement accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResultListGERAN::= SEQUENCE (SIZE 1maxCellReport))			
carrierFreq	CarrierFreqGERAN		
physCellId	physCellId GERAN		
Cgi-Info	Not present		
meas Result SEQUENCE {			
Rssi	INTEGER (063)	Set according to specific test	
}			

Table 9.6.1.4.3-4: ReportConfigInterRAT-PERIODICAL: Additional GSM measurement accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-9 ReportConfigInterRAT-PERIODICAL				
Information Element	Value/remark	Comment	Condition	
ReportConfigInterRAT-PERIODIC AL ::= SEQUENCE {				
maxReportCells	6			
}				

9.6.1.5 Test requirement

Table 9.6.1.5-1, 9.6.1.5-2 and 9.6.1.5-3 define the primary level settings including test tolerances for all tests.

The GSM RSSI measurement accuracy test for the reported values shall meet the requirements in Table 9.6.1.5-4 and Table 9.6.1.5-5.

Table 9.6.1.5-1: E-UTRAN FDD Cell specific test parameters for GSM Carrier RSSI accuracy test in E-UTRAN TDD

Parameter	Unit	Tests 1-12
E-UTRAN RF Channel		4
Number		1
BW _{channel}	MHz	10
OCNG Patterns defined in D.1.1 (OP.1 FDD)		OP.1 FDD
PBCH_RA	dB	
PBCH_RB	dB	
PSS_RA	dB	
SSS_RA	dB	
PCFICH_RB	dB	
PHICH_RA	dB	
PHICH_RB	dB	0
PDCCH_RA	dB	
PDCCH_RB	dB	
PDSCH_RA	dB	
PDSCH_RB	dB	
OCNG_RA ^{NOTE 1}	dB	
OCNG_RB ^{Note 1}	dB	
$N_{oc}^{ m Note~2}$	dBm/15 kHz	-98
RSRP Note 3	dBm/15 kHz	-94
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4
SCH_RP Note 3	dBm/15 kHz	-94
\hat{E}_s/N_{oc}	dB	4
Propagation Condition		AWGN

Note 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

Note 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{oc} to be fulfilled.

Note 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.6.1.5-2: BCCH signal levels at receiver input in dBm

Sub-test	BCCH1	BCCH2	ВССН3	BCCH4	BCCH5	BCCH6
1	-38.7	-38.5	NA	NA	NA	NA
2	-48.7	-50.0	NA	NA	NA	NA
3	-70.7	-70.5	NA	NA	NA	NA
4	-109.3	-109.5	NA	NA	NA	NA
5	-57.5	NA	-54.5	NA	NA	NA
6	-64.5	NA	-59.5	NA	NA	NA
7	-71.5	NA	NA	-64.5	NA	NA
8	-78.5	NA	NA	-69.5	NA	NA
9	-85.5	NA	NA	NA	-74.5	NA
10	-92.5	NA	NA	NA	-79.5	NA
11	-99.5	NA	NA	NA	NA	-84.5
12	-106.5	NA	NA	NA	NA	-89.5

Table 9.6.1.5-3: ARFCN numbers for GSM cells

GSM band	BCCH1	BCCH2	ВССН3	BCCH4	BCCH5	ВССН6
GSM 450	276	293	264	269	281	288
GSM 480	323	340	311	316	328	335
GSM 750	475	511	440	455	485	500
GSM 850	189	251	150	170	210	230
GSM 900	62	124	20	40	80	100
DCS 1800	700	885	585	660	790	835
PCS 1900	700	805	585	660	790	550

As defined in clause 3A.1, the test shall run without frequency overlapping between E-UTRA and GSM cells. The ARFCN numbers defined here, can be updated accordingly (even E-UTRA band Note: specific) to avoid possible overlapping.

Table 9.6.1.5-4: GSM Carrier RSSI absolute accuracy requirements for the reported values

Sub- test	Normal		TL/VL & TH/VH		
	Lowest reported value for BCCH1	Highest reported value for BCCH1	Lowest reported value for BCCH1	Highest reported value for BCCH1	
1	RXLEV_62	RXLEV_63	RXLEV_62	RXLEV_63	
2	RXLEV_55	RXLEV_63	RXLEV_55	RXLEV_63	
3	RXLEV_35	RXLEV_45	RXLEV_33	RXLEV_47	
4	RXLEV_00	RXLEV_06	RXLEV_00	RXLEV_08	
5	RXLEV_46	RXLEV_60	RXLEV_46	RXLEV_60	
6	RXLEV_39	RXLEV_53	RXLEV_39	RXLEV_53	
7	RXLEV_34	RXLEV_44	RXLEV_32	RXLEV_46	
8	RXLEV_27	RXLEV_37	RXLEV_25	RXLEV_39	
9	RXLEV_20	RXLEV_30	RXLEV_18	RXLEV_32	
10	RXLEV_13	RXLEV_23	RXLEV_11	RXLEV_25	
11	RXLEV_06	RXLEV_16	RXLEV_04	RXLEV_18	
12	RXLEV_00	RXLEV_09	RXLEV_00	RXLEV_11	
Note:	It is not mandatory for the UE to report BCCH1 in step 12. In case of no BCCH1 report in step				

12, the absolute accuracy for step 12 is not tested.

Table 9.6.1.5-5: GSM Carrier RSSI Relative accuracy requirements for the reported values

Sub-test	est Normal & TL/VL & TH/VH					
	Lowest reported value for BCCH2	Highest reported value for BCCH2				
1	N/A (Note3)	N/A(Note3)				
2	RXLEV = x-6	RXLEV = x+3				
3	RXLEV = x-4	RXLEV = x+5				
4	N/A (Note3)	N/A (Note3)				
	Lowest reported value for BCCH3	Highest reported value for BCCH3				
5	RXLEV = x-2	RXLEV = x+8				
6	RXLEV = x+1	RXLEV = x+10				
	Lowest reported value for BCCH4	Highest reported value for BCCH4				
7	RXLEV = x+3	RXLEV = x+12				
8	RXLEV = x+5	RXLEV = x+14				
	Lowest reported value for BCCH5	Highest reported value for BCCH5				
9	RXLEV = x+7	RXLEV = x+16				
10	RXLEV = x+8	RXLEV = x+18				
	Lowest reported value for BCCH6	Highest reported value for BCCH6				
11	RXLEV = x+10	RXLEV = x+20				
12	N/A (Note3)	N/A (Note3)				
Note 1:	x is the reported value RXLEV for BCCH1.					
Note 2:	It is not mandatory for the UE to report BCCH1 in	step 12. In case of no BCCH1 report in step				
	12, the relative accuracy for step 12 is not tested.					
Note 3:	Sub-tests 1, 4 and 12 are not applicable for relative	e accuracy as they would be testing the UE				
	outside the side conditions.					

For the test to pass, the ratio of successful reported values in each sub-test for absolute and relative accuracy shall be more than 90% with a confidence level of 95%.

9.6.2 GSM RSSI accuracy for E-UTRAN TDD

9.6.2.1 Test purpose

To verify that the GSM RSSI measurement accuracy is within the specified limits.

9.6.2.2 Test applicability

This test applies all the types of E-UTRA TDD UE release 9 and forward that support GSM. Applicability requires support for FGI bit 16 and 23.

9.6.2.3 Minimum conformance requirements

Absolute accuracy

The R.M.S received signal level at the receiver input shall be measured by the MS and the BSS over the full range of -110 dBm to -48 dBm with an absolute accuracy of ± 4 dB from -110 dBm to -70 dBm under normal conditions and ± 6 dB over the full range under both normal and extreme conditions. The R.M.S received signal level at the receiver input shall be measured by the MS above -48 dBm up to -38 dBm with an absolute accuracy of ± 9 dB under both normal and extreme conditions.

This requirement is summarized in Table 9.6.2.3-1.

Table 9.6.2.3-1: GSM RXLEV absolute accuracy

Parameter	Unit	Accura	Conditions	
raiailletei	Offic	Normal condition	Extreme condition	Input level dBm
	dBm	± 4	± 6	-11070
RXLEV	dBm	± 6	± 6	-7048
	dBm	± 9	± 9	-4838

The reporting range and mapping for RXLEV is summarized in Table 9.6.2.3-2.

Table 9.6.2.3-2: GSM RSSI measurement report mapping

Reported value	Measured quantity value	Unit
RXLEV_00	RXLEV < -110	dBm
RXLEV_01	-110 ≤ RXLEV < -109	dBm
RXLEV_02	-109 ≤ RXLEV < -108	dBm
RXLEV_61	-50 ≤ RXLEV < -49	dBm
RXLEV_62	-49 ≤ RXLEV < -48	dBm
RXLEV_63	-48 ≤ RXLEV	dBm

Relative accuracy

The relative accuracy shall be as follows:

If signals of level x1 and x2 dBm are received (where x1 \leq x2) and levels y1 and y2 dBm respectively are measured, if x2 - x1 < 20 dB and x1 is not below the reference sensitivity level, then y1 and y2 shall be such that:

 $(x2 - x1) - a \le y2 - y1 \le (x2 - x1 + b)$ if the measurements are on the same or on different RF channel within the same frequency band;

and

 $(x2 - x1) - c \le y2 - y1 \le (x2 - x1 + d)$ if the measurements are on different frequency bands:

a, b, c and d are in dB and depend on the value of x1 as follows:

	<u>a</u>	b	С	d
$x1 \ge s+14$, $x2 < -48$ dBm	2	2	4	4
s+14 > x1 ≥ s+1	3	2	5	4
s+1 > x1	4	2	6	4

For single band MS and measurements between ARFCN in the same band for a multiband MS:

s = reference sensitivity level as specified in Table 9.6.2.3-3 (normative reference 3GPP TS 45.005 [16] Table 6.2-1a)

For measurements between ARFCN in different bands:

s = the reference sensitivity level as specified in Table 9.6.2.3-3 (normative reference 3GPP TS 45.005 [16] Table 6.2-1a) for the band including x1.

Table 9.6.2.3-3: Reference sensitivity level for MS

F						
GSM 400 MS	for GSM 400 small MS	-102 dBm				
	for other GSM 400 MS	-104 dBm				
GSM 900 MS	for GSM 900 small MS	-102 dBm				
	for other GSM 900 MS	-104 dBm				
GSM 850 MS	for GSM 850 small MS	-102 dBm				
	for other GSM 850 MS	-104 dBm				
GSM 700 MS	for GSM 700 small MS	-102 dBm				
	for other GSM 700 MS	-104 dBm				
DCS 1 800 MS	for DCS 1 800 class 1 or class 2 MS	-100 / -102 dBm *				
	for DCS 1 800 class 3 MS	-102 dBm				
PCS 1 900 MS	for PCS 1 900 class 1 or class 2 MS	-102 dBm				
	for other PCS 1 900 MS	-104 dBm				
	1 800 class 1 and class 2 MS, the 102 dBm level					
reference	reference sensitivity performance as specified in table 1 for the normal					
conditions defined in TS 45.005 [16] Annex D and 100 dBm level shall be used						
to determine all other MS performances.						

The normative reference for this requirement is:

For E-UTRA: TS 36.133 [4] clause 9.4.1 and A.9.6.2

For GSM: TS 45.008 [15] clause 8.1.2 and 8.1.4 and TS 45.005 [16].

9.6.2.4 Test description

9.6.2.4.1 Initial conditions

Test Environment: Normal, TL/VL, TL/VH, TH/VL, TH/VH; as defined in TS 36.508 [7] clause 4.1.

Frequencies to be tested: According to Annex Etable E-1 and TS 36.508 [7] clauses 4.4.2 and 4.3.1.

Channel Bandwidth to be tested: 10 MHz as defined in TS 36.508 [7] clause 4.3.1.

- 1. Connect the SS (node B emulator) and AWGN noise sources to the UE antenna connectors as shown in TS 36.508 [7] Annex A figure A.14.
- 2. The general test parameter settings are set up according to Table 9.6.2.4.1-1.
- 3. Propagation conditions are set according to Annex B clause B.0.
- 4. Message contents are defined in clause 9.6.2.4.3.
- 5. There is one E-UTRA TDD cell (Cell 1) and two GSM cells (Cell 2 and Cell 3) specified in each test. Cell 1 is the cell used for call setup with the power level set according to Annexes C.0 and C.1 for this test. Cell 2 (BCCH1) and Cell 3 (BCCH other than BCCH1 according to sub-test) are measured and reported by the UE.

Table 9.6.2.4.1-1: General GSM Carrier RSSI test parameters

Parameter	Unit	Value	Comment
PDSCH parameters		DL Reference Measurement	As specified in section A.1.2.
(E-UTRAN TDD)		Channel R.0 TDD	
PCFICH/PDCCH/PHICH		DL Reference Measurement	As specified in section A.2.2.
parameters		Channel R.6 TDD	
(E-UTRAN TDD)			
Active cell	-	Cell 1	
DRX	-	OFF	
Uplink-downlink		1	As specified in table 4.2.2 in TS
configuration of cell 1			36.211 [9]
Special subframe		6	As specifi [9]ed in table 4.2.1 in TS
configuration of cell 1			36.211
Gap pattern Id		1	As specified in 3GPP TS 36.133 [4]
			section 8.1.2.1.
Filtering coefficient	-	0	L3 filtering is not used.
Inter-RAT measurement		GSM Carrier RSSI	
quantity			
Monitored cell list size		6 GSM neighbours induding	Included in the Measurement
		ARFCN 1	control information

9.6.2.4.2 Test procedure

- 1. Ensure the UE is in State 3A-RF according to TS 36.508 [7] clause 7.2A.3.
- 2. Set the parameters according to Table 9.6.2.5-1, 9.6 2.5-2 and 9.6 2.5-3 as appropriate. Propagation conditions for the E-UTRA cell are set according to Annex B clause B.1.
- 3. SS shall transmit an RRCConnectionReconfiguration message.
- 4. The UE shall transmit RRCConnectionReconfigurationComplete message.
- $5. \ UE\, shall\, transmit\, periodically\, Measurement\, Report\, \, messages.$

- 6. SS shall check the reported CSM RSSI value in MeasurementReport messages. The reported RSSI value for Cell 2 is compared to the actual RSSI value according to Table 9.6.2.5-4. This counts as a Pass or Fail for the event "Absolute". Also the reported RSSI value for Cell 3 is compared to the reported RSSI value for Cell 2 for each MeasurementReport message according to Table 9.6.2.5-5. This counts as a Pass or Fail for the event "Relative".
- 7. The SS shall check the MeasurementReport messages transmitted by the UE until the confidence level according to Table G.2.3-1 in Annex G.2 is achieved for each of the events "Absolute" and "Relative". Each event is evaluated only until the confidence level is achieved. Different events may require different times for a verdict.
- 8. Repeat step 1-7 for each sub-test in Table 9.6.2.5-2 as appropriate.

9.6.2.4.3 Message contents

Message contents are according to TS 36.508 [7] values 4.6 with the following exceptions:

Table 9.6.2.4.3-1: Common Exception messages for GSM RSSI measurement accuracy test requirement

Default Message Contents				
Common contents of system information				
blocks exceptions				
Default RRC messages and information	Table H.3.1-1			
elements contents exceptions	Table H.3.1-7			
·	Table H.3.1-11			

Table 9.6.2.4.3-2: MeasuredResults: Additional GSM RSSI measurement accuracy test requirement

Information Element	Value/remark	Comment	Condition
MeasResults ::= SEQUENCE {			
measId	1	Identifies the measurement id for the reporting being performed	
measResultServCell SEQUENCE {			
rsrpResult	RSRP-Range	Set according to specific test	
rsrqResult	RSRQ-Range	Set according to specific test	
}			
measResultNeighCells CHOICE {			
Meas ResultListGERAN	MeasResultListGERAN		
1			

Table 9.6.2.4.3-3: MeasResultListGERAN: Additional GSM measurement accuracy test requirement

Derivation Path: TS 36.331 clause 6.3.5			
Information Element	Value/remark	Comment	Condition
MeasResultListGERAN::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {			
carrierFreq	CarrierFreqGERAN		
physCellId	physCellId GERAN		
Cgi-Info	Not present		
meas Result SEQUENCE {			
Rssi	INTEGER (063)	Set according to specific test	
}			
}			

Table 9.6.2.4.3-4: ReportConfigInterRAT-PERIODICAL: Additional GSM measurement accuracy test requirement

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-9 ReportConfigInterRAT-PERIODICAL							
Information Element	Value/remark	Comment	Condition				
ReportConfigInterRAT-PERIODIC AL ::= SEQUENCE {							
maxReportCells	6						
}							

9.6.2.5 Test requirement

Tables 9.6.2.5-1, 9.6.2.5-2 and 9.6.2.5-3 define the primary level settings including test tolerances for all tests.

The GSM RSSI measurement accuracy test for the reported values shall meet the requirements in Table 9.6.2.5-4 and Table 9.6.2.5-5.

Table 9.6.2.5-1: E-UTRAN TDD Cell specific test parameters for GSM Carrier RSSI accuracy test in E-UTRAN TDD

Parameter	Unit	Tests 1 - 12
E-UTRAN RF Channel		1
Number		
BW _{channel}	MHz	10
OCNG Patterns defined in		OP.1 TDD
D.2.1 (OP.1 TDD)		
PBCH_RA	dB	
PBCH_RB	dB	7
PSS_RA	dB	1
SSS_RA	dB	7
PCFICH_RB	dB	7
PHICH_RA	dB	7
PHICH_RB	dB	0
PDCCH_RA	dB	7
PDCCH_RB	dB	7
PDSCH_RA	dB	7
PDSCH_RB	dB	
OCNG_RANOLE 1	dB	7
OCNG_RB ^{NOTE 1}	dB	
$N_{oc}^{ m Note~2}$	dBm/15 kHz	-98
RSRP Note 3	dBm/15 kHz	-94
$\hat{\mathrm{E}}_{\mathrm{s}}/\mathrm{I}_{\mathrm{ot}}$	dB	4
SCH_RP Note 3	dBm/15 kHz	-94
\hat{E}_s/N_{oc}	dB	4
Propagation Condition		AWGN

NOTE 1: OCNG shall be used such that all cells are fully allocated and a constant total transmitted power spectral density is achieved for all OFDM symbols.

NOTE 2: Interference from other cells and noise sources not specified in the test is assumed to be constant over subcarriers and time and shall be modelled as AWGN of appropriate power for N_{ac} to be fulfilled.

NOTE 3: RSRP and SCH_RP levels have been derived from other parameters for information purposes. They are not settable parameters themselves.

Table 9.6.2.5-2: BCCH signal levels at receiver input in dBm

Sub-test	BCCH1	BCCH2	ВССН3	ВССН4	BCCH5	ВССН6
1	-38.7	-38.5	NA	NA	NA	NA
2	-48.7	-50.0	NA	NA	NA	NA
3	-70.7	-70.5	NA	NA	NA	NA
4	-109.3	-109.5	NA	NA	NA	NA
5	-57.5	NA	-54.5	NA	NA	NA
6	-64.5	NA	-59.5	NA	NA	NA
7	-71.5	NA	NA	-64.5	NA	NA
8	-78.5	NA	NA	-69.5	NA	NA
9	-85.5	NA	NA	NA	-74.5	NA
10	-92.5	NA	NA	NA	-79.5	NA
11	-99.5	NA	NA	NA	NA	-84.5
12	-106.5	NA	NA	NA	NA	-89.5

Table 9.6.2.5-3: ARFCN numbers for GSM cells

GSM band	BCCH1	BCCH2	ВССН3	ВССН4	BCCH5	ВССН6
GSM 450	276	293	264	269	281	288
GSM 480	323	340	311	316	328	335
GSM 750	475	511	440	455	485	500
GSM 850	189	251	150	170	210	230
GSM 900	62	124	20	40	80	100
DCS 1800	700	885	585	660	790	835
PCS 1900	700	805	585	660	790	550

Note: As defined in clause 3A.1, the test shall run without frequency overlapping between E-UTRA and GSM cells. The ARFCN numbers defined here, can be updated accordingly (even E-UTRA band specific) to avoid possible overlapping.

Table 9.6.2.5-4: GSM Carrier RSSI absolute accuracy requirements for the reported values

Sub- test	Norr	nal	TL/VL & TH/VH				
	Lowest reported value for BCCH1	Highest reported value for BCCH1	Lowest reported value for BCCH1	Highest reported value for BCCH1			
1	RXLEV_62	RXLEV_63	RXLEV_62	RXLEV_63			
2	RXLEV_55	RXLEV_63	RXLEV_55	RXLEV_63			
3	RXLEV_35	RXLEV_45	RXLEV_33	RXLEV_47			
4	RXLEV_0	RXLEV_6	RXLEV_0	RXLEV_8			
5	RXLEV_46	RXLEV_60	RXLEV_44	RXLEV_60			
6	RXLEV_39	RXLEV_53	RXLEV_37	RXLEV_53			
7	RXLEV_34	RXLEV_44	RXLEV_32	RXLEV_46			
8	RXLEV_27	RXLEV_37	RXLEV_25	RXLEV_39			
9	RXLEV_20	RXLEV_30	RXLEV_18	RXLEV_32			
10	RXLEV_13	RXLEV_23	RXLEV_11	RXLEV_25			
11	RXLEV_6	RXLEV_16	RXLEV_4	RXLEV_18			
12	RXLEV_0	RXLEV_9	RXLEV_0	RXLEV_11			
Note:	It is not mandatory for the UE to report BCCH1 in step 12. In case of no BCCH1 report in step						

Note: It is not mandatory for the UE to report BCCH1 in step 12. In case of no BCCH1 report in step 12, the absolute accuracy for step 12 is not tested.

Table 9.6.2.5-5: GSM Carrier RSSI Relative accuracy requirements for the reported values

Sub-test	Normal & TL/VL & TH/VH					
	Lowest reported value for BCCH2	Highest reported value for BCCH2				
1	N/A (Note3)	N/A (Note3)				
2	RXLEV = x-6	RXLEV = x+3				
3	RXLEV = x-4	RXLEV = x+5				
4	N/A (Note3)	N/A (Note3)				
	Lowest reported value for BCCH3	Highest reported value for BCCH3				
5	RXLEV = x-2	RXLEV = x+8				
6	RXLEV = x+1	RXLEV = x+10				
	Lowest reported value for BCCH4	Highest reported value for BCCH4				
7	RXLEV = x+3	RXLEV = x+12				
8	RXLEV = x+5	RXLEV = x+14				
	Lowest reported value for BCCH5	Highest reported value for BCCH5				
9	RXLEV = x+7	RXLEV = x+16				
10	RXLEV = x+8	RXLEV = x+18				
	Lowest reported value for BCCH6	Highest reported value for BCCH6				
11	RXLEV = x+10	RXLEV = x+20				
12	N/A (Note3)	N/A (Note3)				
Note 1:	x is the reported value RXLEV for BCCH1.					
Note 2:	It is not mandatory for the UE to report BCCH1 in step 12. In case of no BCCH1 report in step					
	12, the relative accuracy for step 12 is not tested.					
Note 3:	Sub-tests 1, 4 and 12 are not applicable for relative accuracy as they would be testing the UE outside the side conditions.					

For the test to pass, the ratio of successful reported values in each sub-test for absolute and relative accuracy shall be more than 90% with a confidence level of 95%.

9.7 UE Rx – Tx Time Difference

Editor's note: The UE Rx – Tx Time difference test cases can be found in TS 37.571-1 [27].

9.8 RSTD Measurements Accuracy

Editor's note: The RSTD Time difference test cases can be found in TS 37.571-1 [27].

Annex A (normative): Measurement Channels

A.1 PDSCH

A.1.1 FDD

Table A.1.1-1: PDSCH Reference Measurement Channels for FDD

Parameter	Unit		Value					
Reference channel		R.2			R.0	R.1	R.3	R.4
		FDD			FDD	FDD	FDD	FDD
Channel bandwidth	MHz	1.4	3	5	10	10	10	20
Number of transmitter antennas		1			1	2	1	1
Allocated resource blocks (Note 4)		2			24	24	24	24
Allocated subframes per Radio Frame		10			10	10	10	10
Modulation		QPSK			QPSK	QPSK	QPSK	QPSK
Target Coding Rate		1/3			1/3	1/3	1/3	1/3
Information Bit Payload								
For Sub-Frames 4, 9	Bits	120			2088	2088	2088	2088
For Sub-Frame 5	Bits	104			2088	1736	2088	2088
For Sub-Frame 0	Bits	32			1736	1736	1736	1736
For Sub-Frame 1, 2, 3, 6, 7, 8	Bits	0			0	0	2088	0
Number of Code Blocks per Sub-Frame								1
(Note 5)								
For Sub-Frames 4, 9		1			1	1	1	1
For Sub-Frame 5		1			1	1	1	1
For Sub-Frame 0		1			1	1	1	1
For Sub-Frame 1, 2, 3, 6, 7, 8		0			0	0	1	0
Binary Channel Bits Per Sub-Frame								
For Sub-Frames 4, 9	Bits	456			6624	6336	6624	6624
For Sub-Frame 5	Bits	360			6336	6048	6336	6336
For Sub-Frame 0	Bits	176			5784	5520	5784	5784
For Sub-Frame 1, 2, 3, 6, 7, 8	Bits	0			0	0	6624	0
Max. Throughput averaged over 1 frame	kbps	37.6			800	765	2053	800

Note 1: 2 symbols allocated to PDCCH for 10 MHz channel BW. 4 symbols allocated to PDCCH for 1.4 MHz channel BW

Note 2: Reference signal, synchronization signals and PBCH allocated as defined in 3GPP TS 36.211 [9].

Note 3: If necessary the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 36.213 [8].

Note 4: Allocation is located in the middle of bandwidth.

Note 5: If more than one Code Block is present, an additional CRC sequence of L = 24 Bits is attached to each Code Block (otherwise L = 0 Bit).

Note 6: PDSCH allocation applies only to subframes not configured as PRS subframes.

A.1.2 TDD

Table A.1.2-1: PDSCH Reference Measurement Channels for TDD

Parameter	Unit	Value					
Reference channel		R.2			R.0	R.1	R.3
		TDD			TDD	TDD	TDD
Channel bandwidth	MHz	1.4	3	5	10	10	20
Number of transmitter antennas		1			1	2	1
Allocated resource blocks (Note 4)		2			24	24	24
Uplink-Downlink Configuration (Note 5)		1			1	1	1
Special Subframe Configuration (Note 6)		6			6	6	6
Allocated subframes per Radio Frame		6			6	6	6
Modulation		QPSK			QPSK	QPSK	QPSK
Target Coding Rate		1/3			1/3	1/3	1/3
Information Bit Payload							
For Sub-Frames 4,9	Bits	120			2088	2088	2088
For Sub-Frame 5	Bits	104			2088	2088	2088
For Sub-Frame 0	Bits	56			2088	1736	2088
For Sub-Frame 1, 6 (DwPTS)	Bits	56			1032	1032	1032
Number of Code Blocks per Sub-Frame							1
(Note 7)							
For Sub-Frames 4,9		1			1	1	1
For Sub-Frame 5		1			1	1	1
For Sub-Frame 0		1			1	1	1
For Sub-Frame 1, 6 (DwPTS)		1			1	1	1
Binary Channel Bits Per Sub-Frame							
For Sub-Frames 4,9	Bits	456			6624	6336	6624
For Sub-Frame 5	Bits	408			6480	6192	6480
For Sub-Frame 0	Bits	224			5928	5664	5928
For Sub-Frame 1, 6 (DwPTS)	Bits	272			3696	3504	3696
Max. Throughput averaged over 1 frame	Mbps	0.0561			1.0416	1.0064	1.0416
		2					

- Note 1: 2 symbols allocated to PDCCH for 10 MHz channel BW. 4 symbols allocated to PDCCH for 1.4 MHz channel BW. For special subframe (1 & 6) only 2 OFD M symbols are allocated to PDCCH for all bandwidths.
- Note 2: Reference signal, synchronization signals and PBCH allocated as defined in 3GPP TS 36.211 [9].4 symbols allocated to PDCCH for 1.4 MHz channel BW
- Note 3: If necessary the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 36.213 [8]. Reference signal, synchronization signals and PBCH allocated as defined in 3GPP TS 36.211 [9].
- Note 4: Allocation is located in the middle of bandwidth. If necessary the information bit payload size can be adjusted to facilitate the test implementation. The payload sizes are defined in 3GPP TS 36.213 [8].
- Note 5: As per Table 4.2-2 in TS 36.211 [16].
- Note 6: As per Table 4.2-1 in TS 36.211 [16].
- Note 7: f more than one Code Block is present, an additional CRC sequence of L = 24 Bits is attached to each Code Block (otherwise L = 0 Bit).
- Note 8: PDSCH allocation applies only to subframes not configured as PRS subframes.

A.2 PCFICH/PDCCH/PHICH

A.2.1 FDD

Table A.2.1-1: PCFICH/PDCCH/PHICH Reference Channel for FDD

Parameter	Unit	Value					
Reference channel		R.8		R.10	R.6	R.7	R.9
		FDD		FDD	FDD	FDD	FDD
Channel bandwidth	MHz	1.4		20	10	10	10
Number of transmitter antennas		1		1	1	2	2
Control region OFDM symbolsNote1	symbols	4		2	2	2	3
Aggregation level	CCE	2		8	8	8	8
		(Note 6)					
DCI Format		Note 3		Note 3	Note 3	Note 3	Note 3
Cell ID		Note 4		Note 4	Note 4	Note 4	Note 4
Payload (without CRC)	Bits	Note 5		Note 5	Note 5	Note 5	Note 5

Note 1: The control region consists of PCFICH, PHICH and PDCCH.

Note 2: DCI formats are defined in 3GPP TS 36.212.

Note 3: DCI format shall depend upon the test configuration.

Note 4: Cell ID shall depend upon the test configuration.

Note 5: Payload size shall depend upon the test configuration.

Note 6: For PDCCH using SI/RA/P-RNTI, Aggregation level 4 is used.

A.2.2 TDD

Table A.2.2-1: PCFICH/PDCCH/PHICH Reference Channel for TDD

Parameter	Unit		Val	ue		
Reference channel		R.8	R.10	R.6	R.7	R.9
		TDD	TDD	TDD	TDD	TDD
Channel bandwidth	MHz	1.4	20	10	10	10
Number of transmitter antennas		1	1	1	2	2
Control region OFDM symbols Note:	symbols	4	2	2	2	3
		(Note 6)				
Aggregation level	CCE	2	8	8	8	8
		(Note 7)				
DCI Format		Note 3	Note 3	Note 3	Note 3	Note 3
Cell ID		Note 4	Note 4	Note 4	Note 4	Note 4
Payload (without CRC)	Bits	Note 5	Note 5	Note 5	Note 5	Note 5

Note 1: The control region consists of PCFICH, PHICH and PDCCH.

Note 2: DCI formats are defined in 3GPP TS 36.212.

Note 3: DCI format shall depend upon the test configuration.

Note 4: Cell ID shall depend upon the test configuration.

Note 5: Payload size shall depend upon the test configuration.

Note 6: Only 2 OFDM symbols for special subframes $\stackrel{\cdot}{1}$ and 6.

Note 7: For PDCCH using SI/RA/P-RNTI, Aggregation level 4 is used.

A.3 PUSCH

This rule applies to E-UTRA cell(s), which the UE is connected to. The UE is in RRC-CONNECTED mode.

When signalling or data payloads are expected to be sent on the PUSCH, the UE may be provided in advance with PUSCH resources by the SS. For sake of simplicity the PUSCH scheduling may also occur continuously over many consecutive subframes. These options shall not be used if:

1) stated otherwise in the test description, or

2) the transmission of PUSCH and UL scheduling information affects the test purpose (e.g. DRX, PUCCH reception etc.)

For handover test cases, after RRC Connection reconfiguration message implying handover is sent, the UE shall be provided continuously with PUSCH resources by the SS in the source cell. This is done in order to make the requirement UE implementation agnostic, w.r.t. different delays caused by different handling of positive RLC acknowledgements, which are not mandatory and of lower priority than the handover procedure progress (Subclause 5.3.5.4 [5]).

If a PUSCH scheduling occurs, the SS sends uplink scheduling information via PDCCH DCI format 0 for C-RNTI to the UE. The UE sends uplink MAC padding bits on the PUSCH.

Annex B (normative): Propagation Conditions

B.0 No interference

See TS 36.521-1[10] Annex B. 0.

B.1 Static propagation condition

See TS 36.521-1[10] Annex B.1 and B.1.1

B.2 Multi-path fading Propagation Conditions

See TS 36.521-1[10] Annex B.2,B.2.1 and B.2.2

Annex C (normative): Downlink Physical Channels

C.0 Downlink signal

See TS 36.521-1[10] Annex C.0.

C.1 General

See TS 36.521-1[10] Annex C.1.

C.2 Set-up

.See TS 36.521-1[10] Annex C.2.

C.3 Test specific scenarios

C.3.1 ABS Transmission Configurations

C.3.1.1 Non-MBSFN ABS Transmission Configurations

C.3.1.1.1 Non-MBSFN ABS Transmission, 1x2 antenna with PBCH

Table C.3.1.1.1-1: Transmission configuration with non-MBSFN ABS, 1x2 with PBCH

Physical		EPRE,	[dB]		
Channels and Signals	Parameters	Non-ABS	ABS		
PBCH	PBCH_RA	0	0		
FBCII	PBCH_RB	0	0		
PSS	PSS_RA	0	0		
SSS	SSS_RA	0	0		
PCFICH	PCFICH_RB	0	0 (Note 1)		
PHICH	PHICH_RA	0	-Inf		
FILICIT	PHICH_RB	0	-Inf		
PDCCH	PDCCH_RA	0	0 (Note 1)		
FDCCII	PDCCH_RB	0	0 (Note 1)		
PDSCH	PDSCH_RA	0	0 (Note 1)		
РИЗСП	PDSCH_RB	0	0 (Note 1)		
OCNG	OCNG_RA	0	-Inf		
	OCNG_RB	0 -Inf			
NOTE 1: Only used for SIB1, otherwise EPRE is –Inf NOTE 2: 1x2 antenna configuration is assumed					

C.3.1.1.2 Non-MBSFN ABS Transmission, 2x2 antenna without PBCH

Table C.3.1.1.2-1: Transmission configuration #1 with non-MBSFN ABS, 2x2 without PBCH

Physical		EPRE	[dB]
Channels and Signals	Parameters	Non-ABS	ABS
PBCH	PBCH_RA	-3	-Inf
I BOIT	PBCH_RB	-3	-Inf
PSS	PSS_RA	-3	-3
SSS	SSS_RA	-3	-3
PCFICH	PCFICH_RB	1	-Inf
PHICH	PHICH_RA	-3	-Inf
TITION	PHICH_RB	-3	-Inf
PDCCH	PDCCH_RA	1	-Inf
1 00011	PDCCH_RB	1	-Inf
PDSCH	PDSCH_RA	-3	-Inf
1 00011	PDSCH_RB	-3	-Inf
OCNG	OCNG_RA	-3	-Inf
	OCNG_RB	-3	-Inf
NOTE: 2x2 a	ntenna configurati	ion is assumed	

Table C.3.1.1.2-2: Transmission configuration #2 with non-MBSFN ABS, 2x2 without PBCH

Physical		EPRE	[dB]
Channels and Signals	Parameters	Non-ABS	ABS
PBCH	PBCH_RA	-3	-Inf
I BOIT	PBCH_RB	-3	-Inf
PSS	PSS_RA	-3	-3
SSS	SSS_RA	-3	-3
PCFICH	PCFICH_RB	1	-Inf
PHICH	PHICH_RA	-3	-Inf
TITIOTT	PHICH_RB	-3	-Inf
PDCCH	PDCCH_RA	-3	-Inf
FDCCII	PDCCH_RB	-3	-Inf
PDSCH	PDSCH_RA	-3	-Inf
FDSCII	PDSCH_RB	-3	-Inf
OCNG	OCNG_RA	-3	-Inf
OCING	OCNG_RB	-3	-Inf
NOTE: 2x2 a	ntenna configurati	on is assumed	

C.3.1.2 MBSFN ABS Transmission Configurations

C.3.1.2.1 MBSFN ABS Transmission, 1x2 antenna

Table C.3.1.2.1-1: Transmission configuration with MBSFN ABS, 1x2

Physical		EPRE	, [dB]
Channels and Signals	Parameters	Non-ABS	ABS
PBCH	PBCH_RA	0	N/A
PBCH	PBCH_RB	0	N/A
PSS	PSS_RA	0	N/A
SSS	SSS_RA	0	N/A
PCFICH	PCFICH_RB	0	-Inf
PHICH	PHICH_RA	0	-Inf
FILICIT	PHICH_RB	0	-Inf
PDCCH	PDCCH_RA	0	-Inf
FDCCII	PDCCH_RB	0	-Inf
PDSCH	PDSCH_RA	0	-Inf
FDSCII	PDSCH_RB	0	-Inf
PMCH	PMCH_RA	0	-Inf
FIVICH	PMCH_RB	0	-Inf
OCNG	OCNG_RA	0	-Inf
OCNG	OCNG_RB	0	-Inf
NOTE: 1x2 a	ntenna configurati	ion is assumed	

C.3.1.2.2 MBSFN ABS Transmission, 2x2 antenna

Table C.3.1.2.2-1: Transmission configuration #1 with MBSFN ABS, 2x2

Physical	_	EPRE	, [dB]					
Channels and Signals	Parameters	Non-ABS	ABS					
PBCH	PBCH_RA	-3	N/A					
FBCIT	PBCH_RB	-3	N/A					
PSS	PSS_RA	-3	N/A					
SSS	SSS_RA	-3	N/A					
PCFICH	PCFICH_RB	1	-Inf					
PHICH	PHICH_RA	-3	-Inf					
FINCII	PHICH_RB	-3	-Inf					
PDCCH	PDCCH_RA	1	-Inf					
PDCCII	PDCCH_RB	1	-Inf					
PDSCH	PDSCH_RA	-3	-Inf					
PDSCII	PDSCH_RB	-3	-Inf					
PMCH	PMCH_RA	-3	-Inf					
FIVICIT	PMCH_RB	-3	-Inf					
OCNG	OCNG_RA	-3	-Inf					
OCING	OCNG_RB	-3	-Inf					
NOTE: 2x2 a	NOTE: 2x2 antenna configuration is assumed							

Table C.3.1.2.2-2: Transmission configuration # 2 with MBSFN ABS, 2x2

Physical	Parameters	EPRE	, [dB]				
Channels and Signals		Non-ABS	ABS				
PBCH	PBCH_RA	-3	N/A				
FBCIT	PBCH_RB	-3	N/A				
PSS	PSS_RA	-3	N/A				
SSS	SSS_RA	-3	N/A				
PCFICH	PCFICH_RB	1	-Inf				
PHICH	PHICH_RA	-3	-Inf				
FINCII	PHICH_RB	-3	-Inf				
PDCCH	PDCCH_RA	-3	-Inf				
PDCCH	PDCCH_RB	-3	-Inf				
PDSCH	PDSCH_RA	-3	-Inf				
РИЗСП	PDSCH_RB	-3	-Inf				
PMCH	PMCH_RA	-3	-Inf				
FINICH	PMCH_RB	-3	-Inf				
OCNG	OCNG_RA	-3	-Inf				
OCING	OCNG_RB	-3	-Inf				
NOTE: 2x2 a							

C.3.2 Impact of Reference Sensitivity Degradation with Carrier Aggregation on Test Cases

C.3.2.1 Impact of Reference Sensitivity Degradation due to Insertion Loss

For a UE supporting inter-band carrier aggregation configuration with uplink in one E-UTRA band, if there is a relaxation of receiver sensitivity $\Delta R_{IB,c} > 0$ dB as defined in TS 36.101 [5], 7.3.1-1A, there is no adjustment of test parameters in the tests specified in TS 36.133 when $\Delta R_{IB,c} \le 1$ dB.

Annex D (normative): OFDMA Channel Noise Generator (OCNG)

D.1 OCNG Patterns for FDD

The following OCNG patterns are used for modelling allocations to virtual UEs (which are not under test) and/or allocations used for MBSFN. The OCNG pattern for each sub frame specifies the allocations that shall be filled with OCNG, and furthermore, the relative power level of each such allocation.

In each test case the OCNG is expressed by parameters OCNG_RA and OCNG_RB which together with a relative power level (γ) specifies the PDSCH EPRE-to-RS EPRE ratios in OFDM symbols with and without reference symbols, respectively. The relative power, which is used for modelling boosting per virtual UE allocation, is expressed by:

$$\gamma_i = PDSCH_i _RA/OCNG_RA = PDSCH_i _RB/OCNG_RB,$$

where γ_i denotes the relative power level of the *i:th* virtual UE. The parameter settings of OCNG_RA, OCNG_RB, and the set of relative power levels γ are chosen such that when also taking allocations to the UE under test into account, as given by a PDSCH reference channel, a constant transmitted power spectral density that is constant on an OFDM symbol basis is targeted.

Moreover the OCNG pattern is accompanied by a PCFICH/PDCCH/PHICH reference channel which specifies the control region. The number of PDCCH OFDM symbols in the non-MBSFN subframes is the same as specified in the RMC used in the test. The number of PDCCH OFDM symbols in the MBSFN subframes is the maximal allowed according to 3GPP TS 36.213 [8]. For any aggregation and PHICH allocation, the PDCCH and any unused PHICH groups are padded with resource element groups with a power level given respectively by PDCCH_RA/RB and PHICH_RA/RB as specified in the test case such that a total power spectral density in the control region that is constant on an OFDM symbol basis is targeted.

For subframes configured as PRS subframes the PDSCH allocation defined in the OCNG pattern does not apply.

For subframes configured as ABS subframes the PDSCH and PMCH allocation defined in the OCNG pattern does not apply.

The system information is scheduled in the allocations reserved for the OCNG patterns, in the subframes not configured for MBSFN. For this purpose the number of the RB-s allocated with PDSCH defined in the OCNG pattern can be reduced as necessary.

D.1.1 OCNG FDD pattern 1: outer resource blocks allocation in 10 MHz

Table D.1.1-1: OP.1 FDD: OCNG FDD Pattern 1

Allocation n_{PRB}	Rel	PDSCH Data	PMCH Data			
	Subframe					
	0	5	4,9	1-3, 6-8		
0 - 12	0	0	0	N/A	Note 1	N/A
37 - 49	0	0	0	N/A		
0-49	N/A	N/A	N/A	Note 4	N/A	Note 2

- Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 2: Each physical resource block (PRB) is assigned to MBSFN transmission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH symbols shall not contain cell-specific Reference Signals. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is used to scale the power of PMCH.
- Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0 dB for 1 transmit antenna with CRS, +3 dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.2 OCNG FDD pattern 2: full bandwidth allocation in 10 MHz

Table D.1.2-1: OP.2 FDD: OCNG FDD Pattern 2

Allocation	Relative power level γ_{PRB} [dB]				PDSCH Data	PMCH Data
$n_{{\it PRB}}$		Subframe				
	0	5	4, 9	1 - 3, 6 - 8		
0 - 49	0	0	0	N/A	Note 1	N/A
0 - 49	N/A	N/A	N/A	Note 4	N/A	Note 2

- Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 2: Each physical resource block (PRB) is assigned to MBSFN transmission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH symbols shall not contain cell-specific Reference Signals. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is used to scale the power of PMCH.
- Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0 dB for 1 transmit antenna with CRS, +3 dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.3 OCNG FDD pattern 3: outer resource blocks allocation in 1.4 MHz

Table A.3.2.1.3-1: OP.3 FDD: OCNG FDD Pattern 3

Allocation	Relative power level $\gamma_{\it PRB}$ [dB]					PMCH Data
$n_{\it PRB}$	Subframe]	
	0	5	4,9	1-3, 6-8		
0 - 1	0	0	0	N/A	Note 1	N/A
4 - 5	0	0	0	N/A	Note 1	IN/A
0 - 5	N/A	N/A	N/A	Note 4	N/A	Note 2

- Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 2: Each physical resource block (PRB) is assigned to MBSFN transmission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH symbols shall not contain cell-specific Reference Signals. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is used to scale the power of PMCH.
- Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0 dB for 1 transmit antenna with CRS, +3 dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.4 OCNG FDD pattern 4: full bandwidth allocation in 1.4 MHz

Table A.3.2.1.4-1: OP.4 FDD: OCNG FDD Pattern 4

Allocation	Relative power level $\gamma_{\it PRB}$ [dB]					PMCH Data
n_{PRB}]				
	0	5	4, 9	1 - 3, 6 - 8		
0 - 5	0	0	0	N/A	Note 1	N/A
0 - 5	N/A	N/A	N/A	Note 4	N/A	Note 2

Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 2: Each physical resource block (PRB) is assigned to MBSFN transmission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is used to scale the power of PMCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0 dB for 1 transmit antenna with CRS, +3 dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.5 OCNG FDD pattern 5: outer resource blocks allocation in 10 MHz (without MBSFN)

Table D.1.5-1: OP.5 FDD: OCNG FDD Pattern 5

Allocation	Rel	PDSCH Data			
$n_{\it PRB}$					
	0	5	4, 9	1 - 3, 6 - 8	
0 - 12	0	0	0	N/A	
37 - 49	0	0	0	N/A	Note 2
0 - 49	N/A	N/A	N/A	0	

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The

parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with

CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

N/A: Not Applicable

D.1.6 OCNG FDD pattern 6: full bandwidth allocation in 10 MHz (without MBSFN)

Table D.1.6-1: OP.6 FDD: OCNG FDD Pattern 6

Allocation	Rel	PDSCH Data			
n_{PRB}					
	0	5	4, 9	1 - 3, 6 - 8	
0 - 49	0	0	0	0	Note 2

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes. Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

N/A: Not Applicable

D.1.7 OCNG FDD pattern 7: full bandwidth allocation in 1.4 MHz (without MBSFN)

Table D.1.7-1: OP.7 FDD: OCNG FDD Pattern 7

Allocation	Rel	PDSCH Data			
$n_{\it PRB}$					
	0	5	4, 9	1 - 3, 6 - 8	
0 - 5	0	0	0	0	Note 2

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes. Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRR} is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

N/A: Not Applicable

D.1.8 OCNG FDD pattern 8: outer resource blocks allocation in 10 MHz for MBSFN ABS

Table D.1.8-1: OP.8 FDD: OCNG FDD Pattern 8

Allocation	Subframe (Note 1)					
$n_{\it PRB}$	0	5	4,9	(1-3, 6-8) ^{Note4}		
0 – 12	0	0	0	N/A		
37 – 49	0	0	0	N/A	Note 2	
0 – 49	N/A	N/A	N/A	0		

Note 1: PDSCH allocation does not apply to subframes configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK

modulated. The parameter $\gamma_{\it PRB}$ is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The

parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in clause 7.1 in TS 36.213.

Note 4: The subframe(s) configured as MBSFN ABS in a test shall not contain any PMCH data and shall contain CRS only in the first symbol of the first time slot. The subframe(s) configured as MBSFN ABS depend upon the MBSFN ABS pattern used in the test.

N/A: Not Applicable

D.1.9 OCNG FDD pattern 9: full bandwidth allocation in 10 MHz for MBSFN ABS

Table D.1.9-1: OP.9 FDD: OCNG FDD Pattern 9

Allocation		Relative power level $\gamma_{\it PRB}$ [dB]						
n_{PRB}		Subframe (Note 1)						
	0	5	4, 9	(1-3, 6-8) ^{Note4}				
0 – 49	0	0	0	0	Note 2			

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission

mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in clause 7.1 in TS 36.213.

Note 4: The subframe(s) configured as MBSFN ABS in a test shall not contain any PMCH data and shall contain CRS only in the first symbol of the first time slot. The subframe(s) configured as MBSFN ABS depend upon the MBSFN ABS pattern used in the test.

N/A: Not Applicable

D.1.10 OCNG FDD pattern 10: outer resource blocks allocation in 10 MHz with user data in every SF (without MBSFN)

Table D.1.10-1: OP.10 FDD: OCNG FDD Pattern 10

Allocation	Relative power level $\gamma_{\it PRB}$ [dB]	PDSCH Data
$n_{\it PRB}$	Subframe (Note 1)	

	0	5	4, 9	1 - 3, 6 - 8	
0 - 12	0	0	0	0	Note 2
37 - 49	0	0	0	0	Note 2

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated.

The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter

 γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

N/A: Not Applicable

D.1.11 OCNG FDD pattern 11: outer resource blocks allocation in 20 MHz

Table D.1.11-1: OP.11 FDD: OCNG FDD Pattern 11

Allocation	Re	Relative power level γ_{PRB} [dB]						
$n_{{\it PRB}}$		Subfr	ame		Data	Data		
	0	5	4,9	1-3, 6-8				
0 – 37	0	0	0	N/A	Note 1	N/A		
62 – 99	0	0	0	N/A	110.0	14,71		
0-99	N/A	N/A	N/A	Note 4	N/A	Note 2		

Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter

 γ_{PRB} is used to scale the power of PDSCH.

Note 2: Each physical resource block (PRB) is assigned to MBSFN trans mission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH symbols shall not contain cell-specific Reference Signals. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is

Reference Signals only in the first symbol of the first time slot. The parameter γ_{PRB} is used to scale the power of PMCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to

each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0dB for 1 transmit antenna with CRS, +3dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.12 OCNG FDD pattern 12: full bandwidth allocation in 20 MHz

Table D.1.12-1: OP.12 FDD: OCNG FDD Pattern 12

Allocation	Re	Relative power level $\gamma_{\it PRB}$ [dB]					
n_{PRB}		Subfr	ame				
	0	5	4, 9	1 – 3, 6 – 8			
0 – 99	0	0	0	N/A	Note 1	N/A	
0 – 99	N/A	N/A	N/A	Note 4	N/A	Note 2	

Note 1: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter

 γ_{PRB} is used to scale the power of PDSCH.

Note 2: Each physical resource block (PRB) is assigned to MBSFN transmission. The data in each PRB shall be uncorrelated with data in other PRBs over the period of any measurement. The MBSFN data shall be QPSK modulated. PMCH subframes shall contain cell-specific Reference Signals only in the first symbol of the first time slot.

The parameter γ_{PRB} is used to scale the power of PMCH.

Note 3: If two or more transmit antennas with CRS are used in the test, the PDSCH part of OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Note 4: 0dB for 1 transmit antenna with CRS, +3dB for 2 transmit antennas with CRS.

N/A: Not Applicable

D.1.13 OCNG FDD pattern 13: outer resource blocks allocation in 20 MHz (without MBSFN)

Table D.1.13-1: OP.13 FDD: OCNG FDD Pattern 13

Alloc	ation	Relative power level γ_{PRB} [dB]					
$n_{\scriptscriptstyle H}$	PRB		Subframe (Note 1)				
		0	5	4,9	1-3, 6-8		
0 –	37	0	0	0	N/A		
62 -	- 99	0	0	0	N/A	Note 2	
0 -	99	N/A	N/A	N/A	0		
Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes. Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is							
Note 3:	QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.						
	the trans transmit	. The parameter smit power of the antennas with are specified in	ne PDSCH par CRS used in t	t of OCNG is e he test. The ar	qual between Itenna transm	all the	
N/A:	Not App	licable					

D.1.14 OCNG FDD pattern 14: full bandwidth allocation in 20 MHz (without MBSFN)

Table D.1.14-1: OP.14 FDD: OCNG FDD Pattern 14

Allocation $n_{\it PRB}$	Re	lative power l Subframe	· III	B]	PDSCH Data
	0	5	4, 9	1 – 3, 6 – 8	

0 –	99	0	0 0 0 Note 2				
Note 1:	PDSCH subfram	allocation applies.	es only to sub	frames not cor	nfigured as PR	S	
Note 2:	These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is						
	QPSK m	odulated. The	parameter γ_P	$_{RB}$ is used to s	cale the powe	r of	
Note 3:	If two or PDSCH	more transmit a part of OCNG santennas with	shall be transm	nitted to the vir	tual users by a	all the	
	mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power of the PDSCH part of OCNG is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.						
N/A:	Not App	licable					

D.2 OCNG Patterns for TDD

The following OCNG patterns are used for modelling allocations to virtual UEs (which are not under test). The OCNG pattern for each sub frame specifies the allocations that shall be filled with OCNG, and furthermore, the relative power level of each such allocation.

In each test case the OCNG is expressed by parameters OCNG_RA and OCNG_RB which together with a relative power level (γ) specifies the PDSCH EPRE-to-RS EPRE ratios in OFDM symbols with and without reference symbols, respectively. The relative power, which is used for modelling boosting per virtual UE allocation, is expressed by:

$$\gamma_i = PDSCH_i _RA / OCNG _RA = PDSCH_i _RB / OCNG _RB$$

where γ_i denotes the relative power level of the *i:th* virtual UE. The parameter settings of OCNG_RA, OCNG_RB, and the set of relative power levels γ are chosen such that when also taking allocations to the UE under test into account, as given by a PDSCH reference channel, a transmitted power spectral density that is constant on an OFDM symbol basis is targeted.

Moreover the OCNG pattern is accompanied by a PCFICH/PDCCH/PHICH reference channel which specifies the control region. The number of PDCCH OFDM symbols in the non-MBSFN subframes is the same as specified in the RMC used in the test. The number of PDCCH OFDM symbols in the MBSFN subframes is the maximal allowed according to 3GPP TS 36.213 [8]. For any aggregation and PHICH allocation, the PDCCH and any unused PHICH groups are padded with resource element groups with a power level given respectively by PDCCH_RA/RB and PHICH_RA/RB as specified in the test case such that a total power spectral density in the control region that is constant on an OFDM symbol basis is targeted.

For subframes configured as PRS subframes the PDSCH allocation defined in the OCNG pattern does not apply.

For subframes configured as ABS subframes the PDSCH and PMCH allocation defined in the OCNG pattern does not apply.

The system information is scheduled in the allocations reserved for the OCNG patterns, in the subframes not configured for MBSFN. For this purpose the number of the RB-s allocated with PDSCH defined in the OCNG pattern can be reduced as necessary.

D.2.1 OCNG TDD pattern 1: outer resource blocks allocation in 10 MHz

Table D.2.1-1: OP.1 TDD: OCNG TDD Pattern 1 for 5ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level γ_{PRB} [dB]						
$n_{{\scriptscriptstyle PRB}}$		Subframe (Note 1)					
	0	5	3, 4, 8, 9 and 6 (as normal subframe) Note 3	1 and 6 (as special subframe)				
0 - 12	0	0	0	0	Note 2			
37 - 49	0	0	0	0	Note 2			

- Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.
- Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration defined in Table 4.2-2 in 3GPP TS 36.211 [9]. The control region consists of PCFICH, PHICH and PDCCH. Number of OFDM symbols belonging to the control region may vary between subframes.
- Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

D.2.2 OCNG TDD pattern 2: full bandwidth allocation in 10 MHz

Table D.2.2-1: OP.2 TDD: OCNG TDD Pattern 2 for 5ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level γ_{PRB} [dB]						
n_{PRB}		Subframe	e (Note 1)					
	0	5	3,4,8,9 and 6 (as nomal subframe)	1 and 6 (as special subframe)				
0 - 49	0	0	0	0	Note 2			

- Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.
- Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration in Table 4.2-2 in 3GPP TS 36.211[9]. The control region consists of PCFICH, PHICH and PDCCH. Number of OFDM symbols belonging to the control region may vary between subframes.
- Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode
 - 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

D.2.3 OCNG TDD pattern 3: outer resource blocks allocation in 1.4 MHz

Table D.2.3-1: OP.3 TDD: OCNG TDD Pattern 3 for 5 ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level $\gamma_{\it PRB}$ [dB]						
$n_{\it PRB}$		Subframe (Note 1)					
	0	5	3,4,8,9 and 6 (as normal subframe) Note 3	1 and 6 (as special subframe)				
0 - 1	0	0	0	0	Note 2			
4 - 5	0	0	0	0	Note 2			

- Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.
- Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration defined in Table 4.2-2 in 3GPP TS 36.211 [9].
- Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode
 - 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

D.2.4 OCNG TDD pattern 4: full bandwidth allocation in 1.4 MHz

Table D.2.4-1: OP.4 TDD: OCNG TDD Pattern 4 for 5 ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level γ_{PRB} [dB]						
$n_{\it PRB}$		Subframe (Note 1)						
	0	5	3,4,8,9 and 6 (as normal subframe)	1 and 6 (as special subframe)				
0 - 5	0	0	0	0	Note 2			

- Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.
- Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.
- Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration in Table 4.2-2 in 3GPP TS 36.211 [9].
- Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

in TS 36.213.

D.2.5 OCNG TDD pattern 5: outer resource blocks allocation in 10 MHz for MBSFN ABS

Table D.2.5-1: OP.5 TDD: OCNG TDD Pattern 5 for 5ms downlink-to-uplink switch-point periodicity

All	ocation			PDSCH Data		
	n_{PRB}		Relative power lev Subframe (
		0	5	3, 4, 8, 9 and 6 (as normal subframe) Note 3	1 and 6 (as special subframe)	
(0 – 12	0	0	0	Table	Note 2
3	7 – 49	0	0	0	A.3.2.2.1-2	Note 2
Note 1: Note 2:	These physic	al resource blocks	oly to subframes config are assigned to an art over the OCNG PDSC	oitrary number of virt	ual UEs with on	
Note 3:	Subframes at 4.2-2 in TS 3 contain any F subframe(s) of If two or more	vailable for DL trar 6.211 [16]. Any of PMCH data and sh configured as MBS e transmit antenna	eter γ_{PRB} is used to so as mission depends on the subframes 3, 4, 8 a all contain CRS only in FN ABS depend upon s with CRS are used in antennas with CRS an	the Uplink-Downlink and 9 configured as I the first symbol of th the MBSFN ABS pa the test, the OCNG	configuration de MBSFN ABS in a ne first time slot. ttern used in the shall be transm	a test shall not The e test. itted to the
	parameter γ_I	$_{ ho_{RB}}$ applies to each	h antenna port separat ed in the test. The ante	ely, so the transmit p	ower is equal be	etween all the

Table D.2.5-2: OP.5 TDD: OCNG TDD Pattern 5 for special subframe configuration with 5ms downlink-to-uplink switch-point periodicity

Allocation	Ę		Relative power level $\gamma_{\it PRB}$ [dB]							
n_{PRB}	length			Sı	oecial sub	frame cor	nfiguration			
	<u> </u>	0	1	2	3	4	5	6	7	8
	S S		Control region OFDM symbols							
		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
0 – 12	N	0	0	0	0	0	0	0	0	0
0 12	14	U	U	O	U	U	U	U	$>\!\!<$	\times
37 – 49	N	0	0	0	٥	0	0	n	0	0
		J	J		J	U	J	3	$>\!\!<$	\searrow
Note 1: Specia	Note 1: Special subframe configurations are defined in Table 4.2-1 in TS 36.211 [16].									

D.2.6 OCNG TDD pattern 6: full bandwidth allocation in 10 MHz for MBSFN ABS

Table D.2.6-1: OP.6 TDD: OCNG TDD Pattern 6 for 5ms downlink-to-uplink switch-point periodicity

Allocation		PDSCH Data					
n_{PRB}		Subframe (Note 1)					
	0	5	3, 4, 8, 9 and 6 (as normal subframe) ^{Note 3}	1 and 6 (as special subframe) Note 3			
0 – 49	0	0	0	0	Note 2		

Note 1: PDSCH allocation does not apply to subframes configured as PRS subframes.

TS 36.213.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration in Table 4.2-2 in TS 36.211 [16]. Any of the subframes 3, 4, 8 and 9 configured as MBSFN ABS in a test shall not contain any PMCH data and shall contain CRS only in the first symbol of the first time slot. The subframe(s) configured as MBSFN ABS depend upon the MBSFN ABS pattern used in the test.

Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in clause 7.1 in

D.2.7 OCNG TDD pattern 7: outer resource blocks allocation in 20 MHz

Table D.2.7-1: OP.7 TDD: OCNG TDD Pattern 7 for 5ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level $\gamma_{\it PRB}$ [dB]					
n_{PRB}							
	0	5	3, 4, 8, 9 and 6 (as normal subframe) Note 3	1 and 6 (as special subframe)			

0 – 37	0	0	0	Table	Note 2
62 – 99	0	0	0	A.3.2.1.7-2	Note 2

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration defined in Table 4.2-2 in 3GPP TS 36.211 [16].

Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Table D.2.7-2: OP.7 TDD: OCNG TDD Pattern 7 for special subframe configuration with 5ms downlink-to-uplink switch-point periodicity

Allocation	ے		Relative power level $\gamma_{\it PRB}$ [dB]							
$n_{\it PRB}$	length			Sp	oecial sub	frame cor	nfiguration			
		0	1	2	3	4	5	6	7	8
	G C		Control region OFDM symbols							
		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
0 – 37	N	0	0	0	0	0	0	0	Ö	0
0 – 37		U	U	U	U	U	U	O	\times	$\searrow \swarrow$
62 – 99	N	0	0	0	0	0	0	0	0	0
02 – 99			U					U	$>\!\!<$	$>\!\!<$
Note 1: Special su	Note 1: Special subframe configurations are defined in Table 4.2-1 in TS 36.211 [16].									

D.2.8 OCNG TDD pattern 8: full bandwidth allocation in 20 MHz

Table D.2.8-1: OP.8 TDD: OCNG TDD Pattern 8 for 5ms downlink-to-uplink switch-point periodicity

Allocation		Relative power level $\gamma_{\it PRB}$ [dB]							
n_{PRB}		Subframe (Note 1)							
	0	5	3,4,8,9 and 6 (as normal subframe) ^{Note 3}	1 and 6 (as special subframe)					
0 – 99	0	0	0	0	Note 2				

Note 1: PDSCH allocation applies only to subframes not configured as PRS subframes.

Note 2: These physical resource blocks are assigned to an arbitrary number of virtual UEs with one PDSCH per virtual UE; the data transmitted over the OCNG PDSCHs shall be uncorrelated pseudo random data, which is QPSK modulated. The parameter γ_{PRB} is used to scale the power of PDSCH.

Note 3: Subframes available for DL transmission depends on the Uplink-Downlink configuration in Table 4.2-2 in 3GPP TS 36.211 [16].

Note 4: If two or more transmit antennas with CRS are used in the test, the OCNG shall be transmitted to the virtual users by all the transmit antennas with CRS and according to the antenna transmission mode 2. The parameter γ_{PRB} applies to each antenna port separately, so the transmit power is equal between all the transmit antennas with CRS used in the test. The antenna transmission modes are specified in section 7.1 in 3GPP TS 36.213.

Annex E (normative): Cell configuration mapping

The cells used in TS 36.521-3 do not correspond to the cells defined in TS 36.508 [7] section 4.4.2. Table E-1 describes the mapping between cells described in TS 36.521-3 and those defined in TS 36.508 [7]. For each test case the cells as defined in TS 36.508 [7] section 4.4.2 are listed in one row. The test case shall apply the RF parameters as defined in TS 36.521-3 according to the column heading.

NOTE: For example if the second cell in a test case is an inter-frequency cell then Cell3 from TS 36.508 [7] section 4.4.2 is used with the radio parameters as defined for Cell2 in TS 36.521-3.

Table E-1: Cell configuration mapping for RRM testing

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
4.2.1	RRC IDLE / E-UTRAN Cell Reselection / FDD - FDD cell re-				
	selection intra frequency case	Cell1	Cell11		
4.2.2	RRC IDLE / E-UTRAN Cell Reselection / TDD - TDD cell re-				
	selection intra frequency case	Cell1	Cell11		
4.2.3	RRC IDLE / E-UTRAN Cell Reselection / FDD - FDD cell re-				
	selection inter frequency case	Cell6	Cell23		
4.2.4	RRC IDLE / E-UTRAN Cell Reselection / FDD - TDD cell re-			Dual mode	
	selection inter frequency case			in single	
	·	Cell1	Cell31	PLMN	
4.2.5	RRC IDLE / E-UTRAN Cell Reselection / TDD - FDD cell re-				
	selection inter frequency case	Cell31	Cell1		
4.2.6	RRC IDLE / E-UTRAN Cell Reselection / TDD - TDD cell re-				
	selection inter frequency case	Cell6	Cell23		
4.2.7	RRC IDLE / E-UTRAN Cell Reselection / FDD – FDD Inter				
	frequency case in the existence of non-allowed CSG cell	Cell23	Cell6	Cell3	
4.2.8	RRC IDLE / E-UTRAN Cell Reselection / TDD – TDD Inter				
	frequency case in the existence of non-allowed CSG cell	Cell23	Cell6	Cell3	
4.3.1.1	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN				
	FDD - UTRAN FDD cell re-selection: UTRA is of higher priority	Cell3	Cell9		
4.3.1.2	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN				
	FDD - UTRAN FDD cell re-selection: UTRA is of lower priority	Cell3	Cell9		
4.3.1.3	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN				
	FDD - UTRAN FDD cell re-selection in fading propagation				
	conditions: UTRA FDD is of lower priority	Cell3	Cell9		
4.3.2	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN	000	000		
	FDD - UTRAN TDD cell re-selection	Cell6	Cell8		
4.3.3	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN	000	000		
	TDD - UTRAN FDD cell re-selection	Cell6	Cell8		
4.3.4.1	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN				
	TDD - UTRAN TDD cell re-selection: UTRA is of higher priority	Cell6	Cell8		
4.3.4.2	RRC IDLE / E-UTRAN to UTRAN Cell re-selection / E-UTRAN	000	00110		
	TDD - UTRAN TDD cell re-selection: UTRA is of lower priority	Cell6	Cell8		
4.3.4.3	RRC IDLE / E-UTRAN to UTRAN Cell re-selection /EUTRA	00.10	00110		
	TDD-UTRATDD cell reselection in fading propagation				
	conditions: UTRA TDD is of lower priority	Cell3	Cell9		
4.4.1	RRC IDLE / E-UTRAN to GSM Cell re-selection / E-UTRAN	Cono	CONO		
	FDD - GSM cell re-selection	Cell1	Cell26		
4.4.2	RRC IDLE / E-UTRAN to GSM Cell re-selection / E-UTRAN	Com	CONZO		
7.7.2	TDD - GSM cell re-selection	Cell1	Cell26		
4.5.1.1	RRC IDLE / E-UTRAN to HRPD Cell re-selection / E-UTRAN	Celli	JOILEO		
7.5.1.1	FDD - HRPD cell re-selection: HRPD is of lower priority	Cell1	Cell15		
4.5.2.1	RRC IDLE / E-UTRAN to HRPD Cell re-selection / E-UTRAN	Celli	Jenio		
7.5.2.1	TDD - HRPD Cell Reselection: HRPD is of Lower Priority	Cell1	Cell15		
4.6.1.1	RRC IDLE / E-UTRAN to cdma2000 1xRTT Cell re-selection /	06111	Jenij		
7.0.1.1	IE-UTRAN FDD - cdma2000 1xRTT cell re-selection:				
	cdma2000 1xis of lower priority	Cell1	Cell19		
	Journa 2000 TATS OF TOWER PRIORITY	Celli	Centa		

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
4.6.2.1	RRC IDLE / E-UTRAN to cdma2000 1xRTT Cell re-selection /		00	555	
	E-UTRAN TDD - cdma2000 1X Cell Reselection: cdma2000				
	1X is of Lower Priority	Cell1	Cell19		
5.1.1	RRC CONNECTED / E-UTRAN Handover / FDD - FDD / Intra				
	frequency case	Cell1	Cell2		
5.1.2	RRC CONNECTED / E-UTRAN Handover / TDD - TDD / Intra				
	frequency case	Cell1	Cell2		
5.1.3	RRC CONNECTED / E-UTRAN Handover / FDD - FDD / Inter				
	frequency case	Cell6	Cell3		
5.1.4	RRC CONNECTED / E-UTRAN Handover / TDD - TDD / Inter				
	frequency case	Cell6	Cell3		
5.1.5	RRC CONNECTED / E-UTRAN Handover / FDD - FDD / Inter				
	frequency case: unknown target cell	Cell6	Cell3		
5.1.6	RRC CONNECTED / E-UTRAN Handover / TDD - TDD / Inter				
	frequency case: unknown target cell	Cell6	Cell3		
5.1.7	RRC CONNECTED / E-UTRAN Handover / FDD – TDD / Inter			Dual mode	
	frequency case			in multiple	
		Cell1	Cell10	PLMN	
5.1.8	RRC CONNECTED / E-UTRAN Handover / TDD - FDD / Inter				
	frequency case	Cell10	Cell1		
5.2.1	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to UTRAN / E-UTRAN FDD - UTRAN FDD				
	handover	Cell3	Cell9		
5.2.2	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to UTRAN / E-UTRAN TDD - UTRAN FDD				
	handover	Cell6	Cell8		
5.2.3	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to GSM / E-UTRAN FDD - GSM handover	Cell1	Cell26		
5.2.4	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to UTRAN / E-UTRAN TDD - UTRAN TDD				
	handover	Cell3	Cell9		
5.2.5	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to UTRAN / E-UTRAN FDD - UTRAN TDD				
	handover	Cell6	Cell8		
5.2.6	RRC CONNECTED / Handover from E-UTRAN to other RATs				
	/ From E-UTRAN to GSM / E-UTRA TDD - GSM handover	Cell1	Cell26		
5.2.7	RRC CONNECTED / Handover from E-UTRAN to other RATs	0 110	0 110		
F 0 0	/ E-UTRAN FDD - UTRAN FDD handover: unknown target cell	Cell3	Cell9		
5.2.8	RRC CONNECTED / Handover from E-UTRAN to other RATS	Calld	0-1100		
500	/ E-UTRAN FDD - GSM handover: unknown target cell	Cell1	Cell26		
5.2.9	RRC CONNECTED / Handover from E-UTRAN to other RATs / E-UTRAN TDD - GSM Handover: unknown target cell	Cell1	Cell26		
5.2.10	RRC CONNECTED / Handover from E-UTRAN to other RATs	Celli	Celizo		
5.2.10	/ E-UTRAN TDD - UTRAN TDD HO test: unknown target cell	Cell6	Cell8		
5.3.1	RRC CONNECTED / Handover from E-UTRAN to non-3GPP	Cello	Cello		
3.3.1	RATS / E-UTRAN FDD – HRPD handover	Cell1	Cell15		
5.3.2	RRC CONNECTED / Handover from E-UTRAN to non-3GPP	00111	Conto		
0.0.2	RATs / E-UTRAN FDD – cdma2000 1xRTT handover	Cell1	Cell19		
5.3.3	RRC CONNECTED / Handover from E-UTRAN to non-3GPP		300		
0.0.0	RATs / E-UTR AN FDD – HRPD Handover: unknown target cell	Cell1	Cell15		
5.3.4	RRC CONNECTED / Handover from E-UTRAN to non-3GPP				
	RATs / E-UTRAN FDD - cdma2000 1xRTT Handover:				
	unknown target cell	Cell1	Cell19		
5.3.5	RRC CONNECTED / Handover from E-UTRAN to non-3GPP				
	RATs / E-UTR AN TDD-HRPD Handover	Cell1	Cell15		
5.3.6	RRC CONNECTED / Handover from E-UTRAN to non-3GPP		1		
	RATs / E-UTR AN TDD-cdma2000 1X Handover	Cell1	Cell19		
6.1.1	RRC Connection Mobility Control / E-UTRAN FDD Intra-				
	frequency RRC Re-establishment	Cell1	Cell2		
6.1.2	RRC Connection Mobility Control / E-UTRAN FDD Inter-				
	frequency RRC Re-establishment	Cell6	Cell3		
6.1.3	RRC Connection Mobility Control / E-UTRAN TDD Intra-				
	frequency RRC Re-establishment	Cell1	Cell2		
6.1.4	RRC Connection Mobility Control / E-UTRAN TDD Inter-				
	frequency RRC Re-establishment	Cell6	Cell3		

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3
6.2.1	RRC Connection Mobility Control / Random Access / E- UTRAN FDD - Contention Based Random Access	Cell1		
6.2.2	RRC Connection Mobility Control / Random Access / E- UTRAN FDD - Non-Contention Based Random Access	Cell1		
6.2.3	RRC Connection Mobility Control / Random Access / E- UTRAN TDD - Contention Based Random Access	Cell1		
6.2.4	RRC Connection Mobility Control / Random Access / E- UTRAN TDD - Non-Contention Based Random Access	Cell1		
6.3.1	RRC Connection Mobility Control / RRC Connection Release with Redirection / Redirection from E-UTRAN FDD to UTRAN			
6.3.2	FDD RRC Connection Mobility Control / RRC Connection Release	Cell3	Cell9	
	with Redirection / Redirection from E-UTRAN TDD to UTRAN FDD	Cell6	Cell8	
6.3.3	RRC Connection Mobility Control / RRC Connection Release with Redirection / Redirection from E-UTRAN FDD to GERAN			
6.3.4	when System Information is provided RRC Connection Mobility Control / RRC Connection Release	Cell1	Cell26	
	with Redirection / Redirection from E-UTRAN TDD to GERAN when System Information is provided	Cell1	Cell26	
6.3.5	RRC Connection Mobility Control / RRC Connection Release with Redirection / E-UTRA TDD RRC connection release redirection to UTRA TDD	Cell3	Cell9	
6.3.6	RRC Connection Mobility Control / RRC Connection Release with Redirection / E-UTRA FDD RRC connection release redirection to UTRA TDD	Cell6	Cell8	
6.3.7	RRC Connection Mobility Control / RRC Connection Release with Redirection / E-UTRA TDD RRC connection release redirection to UTRA TDD without SI provided	Cell3	Cell9	
6.3.8	RRC Connection Mobility Control / RRC Connection Release with Redirection / E-UTRA FDD RRC connection release	Cell6	Cell8	
6.3.9	redirection to UTRATDD without SI provided RRC Connection Mobility Control / RRC Connection Release with Redirection / Redirection from E-UTRAN FDD to UTRAN	Cello	Сепо	
6.3.10	FDD without System Information RRC Connection Mobility Control / RRC Connection Release	Cell3	Cell9	
	with Redirection / Redirection from E-UTRAN FDD to GERAN when System Information is not provided	Cell1	Cell26	
6.3.11	RRC Connection Mobility Control / RRC Connection Release with Redirection / Redirection from E-UTRAN TDD to GERAN			
6.3.12	when System Information is not provided RRC Connection Mobility Control / RRC Connection Release	Cell1	Cell26	
	with Redirection / E-UTRAN TDD RRC connection release redirection to UTRAN FDD without SI provided	Cell6	Cell8	
7.1.1 7.1.2	E-UTRAN FDD-UE Transmit Timing Accuracy E-UTRAN TDD-UE Transmit Timing Accuracy	Cell1		
7.1.2	E-UTRAN FDD-UE Transmit Hinnig Accuracy E-UTRAN FDD-UE Timing Advance Adjustment Accuracy	Cell1		
7.2.2	E-UTRAN TDD-UE Timing Advance Adjustment Accuracy	Cell1		
7.3.1	E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync	Cell1		
7.3.2	E-UTRAN FDD Radio Link Monitoring Test for In-sync	Cell1		
7.3.3 7.3.4	E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync	Cell1		
7.3.4	E-UTRAN TDD Radio Link Monitoring Test for In-sync E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX	Cell1		
7.3.6	E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX	Cell1		
7.3.7	E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX	Cell1		
7.3.8	E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX	Cell1		
8.1.1	UE Measurement Procedures / E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation conditions in asynchronous cells	Cell1	Cell2	
8.1.2	UE Measurement Procedures / E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation			
	conditions in synchronous cells	Cell1	Cell2	

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
8.1.3	UE Measurement Procedures / E-UTRAN FDD-FDD intra				
	frequency event triggered reporting under fading propagation				
	conditions in synchronous cells with DRX	Cell1	Cell2		
8.1.4	Void				
8.1.5	E-UTRAN FDD - FDD Intra-frequency identification of a new				
	CGI of E-UTR A cell using autonomous gaps	Cell1	Cell2		
8.1.6	E-UTRAN FDD - FDD Intra-frequency identification of a new				
	CGI of E-UTR A cell using autonomous gaps with DRX	Cell1	Cell2		
8.2.1	UE Measurement Procedures / E-UTRAN TDD-TDD intra				
	frequency event triggered reporting under fading propagation				
	conditions in synchronous cells	Cell1	Cell2		
8.2.2	UE Measurement Procedures / E-UTRAN TDD-TDD intra-				
	frequency event triggered reporting under fading propagation				
	conditions in synchronous cells with DRX	Cell1	Cell2		
8.2.3	E-UTRAN TDD - TDD Intra-frequency identification of a new				
	CGI of E-UTR A cell using autonomous gaps	Cell1	Cell2		
8.2.4	E-UTRAN TDD - TDD Intra-frequency identification of a new				
	CGI of E-UTRA cell using autonomous gaps with DRX	Cell1	Cell2		
8.3.1	UE Measurement Procedures / E-UTRAN FDD-FDD inter				
	frequency event triggered reporting under fading propagation				
	conditions in asynchronous cells	Cell6	Cell3		
8.3.2	UE Measurement Procedures / E-UTRAN FDD-FDD inter	000	0 00		
0.0.2	frequency event triggered reporting when DRX is used under				
	fading propagation conditions in asynchronous cells	Cell6	Cell3		
8.3.3	IUE Measurement Procedures / E-UTRAN FDD-FDD inter	Cono	Cono		
0.0.0	frequency event triggered reporting under AWGN propagation				
	conditions in asynchronous cells with DRX when L3 filtering is				
	used	Cell6	Cell3		
8.3.4	E-UTRAN FDD - FDD Inter-frequency identification of a new	OCIIO	OCIIO		
0.0.4	CGI of E-UTR A cell using autonomous gaps	Cell6	Cell3		
8.3.5	E-UTRAN FDD - FDD Inter-frequency identification of a new	OCIIO	OCIIO		
0.0.0	CGI of E-UTRA cell using autonomous gaps with DRX	Cell6	Cell3		
8.4.1	UE Measurement Procedures / E-UTRAN TDD-TDD inter-	Collo	Cono		
0.4.1	frequency event triggered reporting under fading propagation				
	conditions in synchronous cells	Cell6	Cell3		
8.4.2	UE Measurement Procedures / E-UTRAN TDD-TDD Inter-	000	Conc		
0.4.2	frequency event triggered reporting when DRX is used under				
	fading propagation conditions in synchronous cells	Cell6	Cell3		
8.4.3	E-UTRAN TDD-TDD inter-frequency event triggered reporting	000	Conc		
0.4.0	under AWGN propagation conditions in synchronous cells with				
	DRX when L3 filtering is used	Cell6	Cell3		
8.4.4	E-UTRAN TDD - TDD Inter-frequency identification of a new	000	Conc		
0.4.4	CGI of E-UTRA cell using autonomous gaps	Cell6	Cell3		
8.4.5	E-UTRAN TDD - TDD Inter-frequency identification of a new	OCIIO	OCIIO		
	CGI of E-UTRA cell using autonomous gaps with DRX	Cell6	Cell3		
8.5.1	UE Measurement Procedures / E-UTRAN FDD - UTRAN FDD	55110	30110		
0.0.1	event triggered reporting under fading propagation conditions	Cell3	Cell9		
8.5.2	UE Measurement Procedures / E-UTRAN FDD - UTRAN FDD	55110	30110		
3.3.2	SON ANR cell search reporting under AWGN propagation				
	conditions	Cell3	Cell9		
8.5.3	UE Measurement Procedures / E-UTRAN FDD - UTRAN FDD	55110	30110		
0.0.3	event triggered reporting when DRX is used under fading				
	propagation conditions	Cell3	Cell9		
8.5.4	UE Measurement Procedures / E-UTRAN FDD - UTRAN FDD	0010	JUNIO		
0.5.4	enhanced cell identification under AWGN propagation				
	conditions	Cell3	Cell9		
8.6.1	UE Measurement Procedures / E-UTRAN TDD - UTRAN FDD	0010	OCIIO		
0.0.1		Colla	Collo		
8.7.1	event triggered reporting under fading propagation conditions UE Measurement Procedures / E-UTRAN TDD - UTRAN TDD	Cell1	Cell8		
0.7.1		Colla	Callo		
070	event triggered reporting under fading propagation conditions UE Measurement Procedures / E-UTRAN TDD - UTRAN TDD	Cell1	Cell8		
8.7.2					
	cell search when DRX is used under fading propagation	Colla	Callo		
	conditions	Cell1	Cell8		<u> </u>

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
8.7.3	UE Measurement Procedures / E-UTRAN TDD - UTRAN TDD				
	SON ANR cell search reporting under AWGN propagation				
	conditions	Cell3	Cell9		
8.7.4	UE Measurement Procedures / E-UTRAN TDD - UTRAN TDD				
	enhanced cell identification under AWGN propagation				
	conditions	Cell3	Cell9		
8.8.1	UE Measurement Procedures / E-UTRAN FDD - GSM event				
	triggered reporting in AWGN	Cell6	Cell26		
8.8.2	UE Measurement Procedures / E-UTRAN FDD - GSM event				
	triggered reporting when DRX is used in AWGN	Cell6	Cell26		
8.9.1	UE Measurement Procedures / E-UTRAN FDD - UTRAN TDD				
	event triggered reporting under fading propagation conditions	Cell1	Cell8		
8.9.2	UE Measurement Procedures / E-UTRAN FDD - UTRAN TDD				
	enhanced cell identification under AWGN propagation				
	conditions	Cell1	Cell8		
8.10.1	UE Measurement Procedures / E-UTRAN TDD - GSM event				
	triggered reporting in AWGN	Cell6	Cell26		
8.10.2	UE Measurement Procedures / E-UTRAN TDD - GSM event				
	triggered reporting when DRX is used in AWGN	Cell6	Cell26		
8.11.1	UE Measurement Procedures / Monitoring of multiple layers /				
	E-UTRAN FDD - E-UTRAN FDD and E-UTRAN FDD Inter-				
	frequency event triggered reporting under fading propagation				
	conditions	Cell1	Cell3	Cell6	
8.11.2	UE Measurement Procedures / Monitoring of multiple layers /				
	E-UTRAN TDD - E-UTRAN TDD and E-UTRAN TDD Inter-				
	frequency event triggered reporting under fading propagation				
	conditions	Cell1	Cell3	Cell6	
8.11.3	UE Measurement Procedures / Monitoring of multiple layers /	00	000	00.00	
0.11.0	InterRAT E-UTRA FDD to E-UTRA FDD and UTRA FDD cell				
	search	Cell1	Cell6	Cell8	
8.11.4	UE Measurement Procedures / Monitoring of multiple layers /	00	00.10	Cono	
	InterRAT E-UTRA TDD to E-UTRA TDD and UTRA TDD cell				
	search	Cell1	Cell6	Cell8	
8.11.5	UE Measurement Procedures / Combined E-UTRAN FDD - E-				
	UTRA FDD and GSM cell search. E-UTRA cells in fading;				
	GSM cell in static propagation conditions	Cell6	Cell3	Cell24	
8.11.6	UE Measurement Procedures / Combined E-UTRAN TDD - E-				
	UTRATDD and GSM cell search. E-UTRA cells in fading;				
	GSM cell in static propagation conditions	Cell6	Cell3	Cell24	
8.14.1	UE Measurement Procedures / E-UTRAN TDD-FDD Inter-				
	frequency event triggered reporting under fading propagation				
	conditions in asynchronous cells	Cell10	Cell1		
8.14.2	UE Measurement Procedures / E-UTRAN TDD-FDD Inter-				
	frequency event triggered reporting when DRX is used under				
	fading propagation conditions in synchronous cells	Cell10	Cell1		
8.14.3	UE Measurement Procedures / E-UTRAN TDD - FDD Inter-				
	frequency identification of a new CGI of E-UTRA cell using				
	autonomous gaps	Cell10	Cell1		
8.15.1	UE Measurement Procedures / E-UTRAN FDD-TDD Inter-			† †	
	frequency event triggered reporting under fading propagation				
	conditions in asynchronous cells	Cell1	Cell10		
8.15.2	UE Measurement Procedures / E-UTRAN FDD-TDD Inter-	301	330		
-	frequency event triggered reporting when DRX is used under				
	fading propagation conditions in asynchronous cells	Cell1	Cell10		
8.15.3	UE Measurement Procedures / E-UTRAN FDD - TDD Inter-	00111	551110	+ + + + + + + + + + + + + + + + + + + +	
33.0	frequency identification of a new CGI of E-UTRA cell using				
	autonomous gaps	Cell1	Cell10		
	lactorionic do dobo	100	3010	1	

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
8.16.1	UE Measurement Procedures / E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX	Cell1	FFS	FFS	Intra- band
		Calla	Call40	Callan	Inter-
8.16.2	UE Measurement Procedures / E-UTRAN TDD event triggered	Cell1	Cell10	Cell30	band Intra-
0.10.2	reporting under deactivated SCell in non-DRX	Cell1	FFS	FFS	band Inter-
8.16.3	UE Measurement Procedures / E-UTRAN FDD-FDD Event	Cell1	Cell10	Cell30	band
	triggered reporting on deactivated SCell with PCell interruption in non-DRX	Cell1	FFS	FFS	Intra- band
8.16.4	UE Measurement Procedures / E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX	Cell1	Cell3	Cell12	Intra- band
8.16.5	E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth	Cell1	Cell3	Cell12	Intra- band
		Cell1	Cell10	Cell30	Inter- band
8.16.6	E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandwidth	Cell1	Cell3	Cell12	Intra- band
		Cell1	Cell10	Cell30	Inter- band
8.18.1	UE Measurement Procedures / E-UTRAN TDD-HRPD event triggered reporting under fading propagation conditions	Cell1	Cell15		
8.19.1	UE Measurement Procedures / E-UTRAN TDD-CDMA2000 1X event triggered reporting under fading propagation conditions	Cell1	Cell19		
9.1.1.1	Measurement Performance Requirements / E-UTRAN / FDD Intra frequency RSRP Accuracy / Absolute	Cell1	Cell2		
9.1.1.2	Measurement Performance Requirements / E-UTRAN / FDD Intra frequency RSRP Accuracy / Relative	Cell1	Cell2		
9.1.2.1	Measurement Performance Requirements / E-UTRAN / TDD Intra Frequency RSRP Accuracy / Absolute	Cell1	Cell2		
9.1.2.2	Measurement Performance Requirements / E-UTRAN / TDD Intra Frequency RSRP Accuracy / Relative	Cell1	Cell2		
9.1.3.1	Measurement Performance Requirements / E-UTRAN / FDD Inter frequency RSRP Accuracy / Absolute	Cell6	Cell3		
9.1.3.2	Measurement Performance Requirements / E-UTRAN / FDD Inter frequency RSRP Accuracy / Relative	Cell6	Cell3		
9.1.4.1	Measurement Performance Requirements / E-UTRAN / TDD Inter Frequency RSRP Accuracy / Absolute Measurement Performance Requirements / E-UTRAN / TDD	Cell6	Cell3		
9.1.4.2	Inter Frequency RSRP Accuracy / Relative Measurement Performance Requirements / E-UTRAN / FDD —	Cell6	Cell3		
9.1.5.1	TDD Inter frequency RSRP Accuracy / Absolute	Cell1	Cell10		
9.1.5.2	Measurement Performance Requirements / E-UTRAN / FDD- TDD Inter frequency RSRP Accuracy / Relative	Cell1	Cell10		
9.1.6.1	Measurement Performance Requirements / FDD Absolute RSRP Accuracy E-UTRA for Carrier Aggregation	Cell1	FFS	FFS	Intra- band
0463	Magaurement Performance Paguirements / EDD Palating	Cell1	Cell10	Cell30	Inter- band
9.1.6.2	Measurement Performance Requirements / FDD Relative RSRP Accuracy E-UTRA for Carrier Aggregation	Cell1	FFS	FFS	Intra- band
9.1.7.1	Measurement Performance Requirements / TDD Absolute	Cell1	Cell10	Cell30	Inter- band Intra-
<i>3.1.1.</i> 1	RSRP Accuracy E-UTRA for Carrier Aggregation	Cell1	FFS	FFS	band Inter-
9.1.7.2	Measurement Performance Requirements / TDD Relative	Cell1	Cell10	Cell30	band Intra-
J.1.1.2	RSRP Accuracy E-UTR A for Carrier Aggregation	Cell1	FFS	FFS	band Inter-
9.1.8.1	FDD Absolute RSRP Accuracy under Time-Domain	Cell1	Cell10	Cell30	band
V.1.0.1	Measurement Resource Restriction with Non-MBSFN ABS (eICIC)	Cell1	Cell2		

Test Case	Description	36.521-3 Cell1	36.521-3 Cell2	36.521-3 Cell3	
9.1.8.2	FDD Relative RSRP Accuracy under Time-Domain				
	Measurement Resource Restriction with Non-MBSFN ABS (eICIC)	Cell1	Cell2		
9.1.9.1	TDD Absolute RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)	Cell1	Cell2		
9.1.9.2	TDD Relative RSRP Accuracy under Time-Domain Measurement Resource Restriction with Non-MBSFN ABS (eICIC)	Cell1	Cell2		
9.1.13.1	Measurement Performance Requirements / TDD Absolute RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz	Cell1	Cell3	Cell12	Intra- band
		Cell1	Cell10	Cell30	Inter- band
9.1.13.2	Measurement Performance Requirements / TDD Relative RSRP Accuracy for E-UTRA Carrier Aggregation for 20 MHz	Cell1	Cell3	Cell12	Intra- band Inter-
		Cell1	Cell10	Cell30	band
9.2.1.1	Measurement Performance Requirements / E-UTRAN / FDD Intra frequency RSRQ Accuracy / Absolute	Cell1	Cell2		
9.2.2.1	Measurement Performance Requirements / E-UTRAN / TDD Intra Frequency RSRQ Accuracy / Absolute	Cell1	Cell2		
9.2.3.1	Measurement Performance Requirements / E-UTRAN / FDD Inter frequency RSRQ Accuracy / Absolute	Cell6	Cell3		
9.2.3.2	Measurement Performance Requirements / E-UTRAN / FDD Inter frequency RSRQ Accuracy / Relative	Cell6	Cell3		
9.2.4.1	Measurement Performance Requirements / E-UTRAN / TDD - TDD Inter Frequency RSRQ Accuracy / Absolute	Cell6	Cell3		
9.2.4.2	Measurement Performance Requirements / E-UTRAN / TDD - TDD Inter Frequency RSRQ Accuracy / Relative	Cell6	Cell3		
9.2.4A.1	Measurement Performance Requirements / FDD - TDD Inter Frequency Absolute RSRQ Accuracy	Cell1	Cell10		
9.2.4A.2	Measurement Performance Requirements / FDD - TDD Inter Frequency Relative Accuracy of RSRQ	Cell1	Cell10		
9.2.5.1	Measurement Performance Requirements / FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation	Cell1	FFS	FFS	Intra- band Inter-
9.2.5.2	Measurement Performance Requirements / FDD Relative	Cell1	Cell10	Cell30	band Intra-
9.2.3.2	RSRQ Accuracy E-UTRA for Carrier Aggregation	Cell1	FFS	FFS	band Inter-
9.2.6.1	Measurement Performance Requirements / TDD Absolute	Cell1	Cell10	Cell30	band Intra-
9.2.0.1	RSRQ Accuracy for E-UTRA Carrier Aggregation	Cell1	FFS	FFS	band Inter-
9.2.6.2	Measurement Performance Requirements / TDD Relative	Cell1	Cell10	Cell30	band Intra-
3.2.0.2	RSRQ Accuracy for E-UTR A Carrier Aggregation	Cell1	FFS	FFS	band Inter-
9.2.7.1	FDD RSRQ under Time Domain Measurement Resource	Cell1	Cell10	Cell30	band
9.2.8.1	Restriction with Non-MBSFN ABS (eICIC) TDD RSRQ under Time Domain Measurement Resource	Cell1	Cell2		
	Restriction with Non-MBSFN ABS (eICIC)	Cell1	Cell2		Intro
9.2.12.1	Measurement Performance Requirements / TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz	Cell1	Cell3	Cell12	Intra- band Inter-
9.2.12.2	Measurement Performance Requirements / TDD Relative	Cell1	Cell10	Cell30	band Intra-
V.E. E.E	RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz	Cell1	Cell3	Cell12	band Inter-
9.3.1	Measurement Performance Requirements / E-UTRAN FDD -	Cell1	Cell10	Cell30	band
	UTRA FDD CPICH RSCP absolute accuracy	Cell3	Cell9		
9.3.2	Measurement Performance Requirements / E-UTRAN TDD- UTRA FDD CPICH RSCP absolute accuracy	Cell3	Cell9		

Test Case	Description	36.521-3	36.521-3	36.521-3	
		Cell1	Cell2	Cell3	
9.4.1	Measurement Performance Requirements / E- UTRAN FDD -				
	UTRA FDD CPICH Ec/No absolute accuracy	Cell3	Cell9		
9.4.2	Measurement Performance Requirements / E- UTRAN TDD -				
	UTRA FDD CPICH Ec/No absolute accuracy	Cell3	Cell9		
9.5.1	Measurement Performance Requirements / E- UTRAN FDD -				
	UTRATDD P-CCPCH RSCP absolute accuracy	Cell3	Cell9		
9.5.2	Measurement Performance Requirements / E- UTRAN TDD -				
	UTRATDD P-CCPCH RSCP absolute accuracy	Cell3	Cell9		
9.6.1	GSM RSSI absolute accuracy for E-UTRAN FDD	Cell1	Cell26	Cell24	
9.6.2	GSM RSSI absolute accuracy for E-UTRAN TDD	Cell1	Cell26	Cell24	

Annex F (normative): Measurement uncertainties and Test Tolerances

The requirements of this clause apply to all applicable tests in the present document.

F.1 Acceptable uncertainty of Test System (normative)

See TS 36.521-1[10] Annex F1.

F.1.1 Measurement of test environments

See TS 36.521-1[10] Annex F1.1.

F.1.2 Measurement of RRM requirements

Table F.1.2-1: Maximum Test System Uncertainty for RRM Requirements

Subclause	Maximum Test	Derivation of Test System Uncertainty
Cabolado	System Uncertainty ¹	Donnandi oi root eyetem encertamity
4.2.1 E-UTRA FDD - FDD cell re-selection	N _∞ ±1.0 dB averaged	Note:
intra frequency	over BW _{Config}	Ês₁/N₀c is the ratio of cell 1 signal / AWGN
	Ês ₁ / N _{oc} ±0.3 dB	Ês₂/N₀c is the ratio of cell 2 signal / AWGN
	averaged over BW _{Config}	
	$\hat{E}s_2/N_{oc} \pm 0.3 dB$	
	averaged over BW _{Config}	
4.2.2 E-UTRATDD - TDD cell re-selection	Same as 4.2.1	
intra frequency		
4.2.3 E-UTRA FDD - FDD cell re-selection	N _{oc1} ±0.7 dB averaged	Note:
inter frequency	over BW _{Config}	N _{oc1} is the AWGN on cell 1 frequency
	$\hat{E}_{s_1}/N_{oc1} \pm 0.3 dB$	Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	N _{oc2} is the AWGN on cell 2 frequency
	N _{oc2} ±0.7 dB averaged	Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	over BW _{Config}	
	$\hat{E}s_2/N_{oc2}\pm0.3 dB$	
	averaged over BW _{Config}	
4.2.4 E-UTRA FDD - TDD cell re-selection	Same as 4.2.3	
inter frequency		
4.2.5 E-UTRATDD - FDD cell re-selection	Same as 4.2.3	
inter frequency		
4.2.6 E-UTRATDD - TDD cell re-selection	Same as 4.2.3	
inter frequency		
4.2.7 E-UTRA FDD Inter frequency re-	N _{oc1} ±1.0 dB averaged	Note:
selection in the existence of non-allowed	over BW _{Config}	N _{oc1} is the AWGN on frequency 1
CSG cell	$\hat{E}s_1/N_{oc1}\pm0.3 dB$	Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	Ês ₃ / N _{oc1} is the ratio of cell 3 signal / AWGN
	Ês ₃ / N _{oc1} ±0.3 dB	
	averaged over BW _{Config}	
	N _{oc2} ±1.0 dB averaged	
	over BW _{Config}	N is the AWCN on frequency?
	Ês ₂ / N _{oc2} ±0.3 dB	$N_{\infty 2}$ is the AWGN on frequency 2 $\hat{E}s_2/N_{\infty 2}$ is the ratio of cell 2 signal / AWGN
	averaged over BW _{Config}	ES2/ Noc2 IS the fatio of cell 2 Signal / AVVGN
4.2.8 E-UTRATDD Inter frequency re-	Same as 4.2.7	
selection in the existence of non-allowed	Same as 4.2.7	
CSG cell		
4.3.1.1 E-UTRA FDD - UTR AN FDD cell	E-UTRA cell	Notes:
reselection: UTRA FDD is of higher priority	N _∞ ±0.7 dB averaged	
l sections in a real result of ringher priority	over BW _{Config}	N _{oc} is the AWGN on cell 1 (E-UTRA) frequency
	Ês / N _{oc} ±0.3 dB	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3
	5 - Soming	l _{oc} is the AWGN on cell 2 (UTRA) frequency
	UTRA cell	lor / loc is the ratio of cell 2 signal / AWGN
	$I_{oc} \pm 0.7 dB$	CPICH E _c / I _{or} is the fraction of cell 2 power
	$I_{or} / I_{oc} \pm 0.3 dB$	assigned to the CPICH Physical channel
	CPICH E _c / I _{or} ±0.1 dB	
4.3.1.2 E-UTRAN FDD - UTRAN FDD cell	Same as 4.3.1.1	
re-selection: UTRA FDD is of lower priority		

4.3.1.3 EUTRA FDD-UTRA FDD cell reselection in fading propagation conditions: UTRA FDD is of lower priority	E-UTRA cell N _{oc} ±0.7 dB averaged over BW _{Config} Ês / N _{oc} ±0.6 dB averaged over BW _{Config} UTRA cell loc ±0.7 dB lor / loc ±0.3 dB CPICH E _c / lor ±0.1 dB	Notes: N _{oc} is the AWGN on cell 1 (E-UTRA) frequency Ês / N _{oc} is the ratio of cell 1 signal / AWGN Ês / N _{oc} uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: Ês / N _{oc} uncertainty = SQRT (Signal-to-noise ratio uncertainty ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Fading profile power uncertainty ±0.5 dB I _{oc} is the AWGN on cell 2 (UTRA) frequency
4.3.2 E-UTRA FDD - UTR AN TDD cell re-	E-UTRA cell	l _{or} / l _{oc} is the ratio of cell 2 signal / AWGN CPICH E _c / l _{or} is the fraction of cell 2 power assigned to the CPICH Physical channel Note:
4.3.2 E-OTRAFDD - OTRAN TDD cell reselection	N_{∞} ±0.7 dB averaged over BW _{Config} \hat{E} s / N_{∞} ±0.3 dB averaged over BW _{Config} UTRA cell I_{∞} ±0.7 dB \hat{I}_{or} / I_{∞} ±0.3 dB PCCPCH Ec/lor ±0.1 dB	N_{oc} is the AWGN on cell 1 frequency $\hat{E}s$ / N_{oc} is the ratio of cell 1 signal / AWGN I_{oc} is the AWGN on cell 2 frequency \hat{I}_{or} / I_{oc} is the ratio of cell 2 signal / AWGN PCCPCH E_c / I_{or} is the fraction of cell 2 power assigned to the PCCPCH Physical channel DwPCH_Ec/lor is the fraction of cell 2 power assigned to the DwPCH channel
4.3.3 E-UTRAN TDD - UTRAN FDD cell re-	DwPCH_Ec/lor ±0.1 dB Same as 4.3.1.2	
selection: UTRA FDD is of lower priority 4.3.4.1 E-UTRA TDD - UTR AN TDD cell re-	Same as 4.3.2	
selection: UTRA is of higher priority 4.3.4.2 E-UTRA TDD - UTRAN TDD cell re-	Same as 4.3.2	
selection: UTRA is of lower priority 4.3.4.3 EUTRA TDD-UTRA TDD cell	E-UTRA cell	Note:
4.3.4.3 EUTRA TDD-UTRA TDD cell reselection in fading propagation conditions: UTRA TDD is of lower priority	N_{∞} ±0.7 dB averaged over BW _{Config} \hat{E} s / N_{∞} ±0.6 dB averaged over BW _{Config} $\frac{UTRA\ cell}{l_{\infty}$ ±0.7 dB \hat{l}_{or} / l_{∞} ±0.3 dB PCCPCH Ec/lor ±0.1 dB	Note: Noc is the AWGN on cell 1 (E-UTRA) frequency Ês / Noc is the ratio of cell 1 signal / AWGN Each Ês / Noc uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: Ês / Noc uncertainty = SQRT (Signal-to-noise ratio uncertainty ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Fading profile power uncertainty ±0.5 dB Ioc is the AWGN on cell 2 (UTRA) frequency Îor / Ioc is the ratio of cell 2 signal / AWGN PCCPCH Ec / Ior is the fraction of cell 2 power

4.4.1 E-UTRAN FDD - GSM cell reselection	
over BW _{Config} Ês / N _∞ is the ratio of cell 1 signa ês / N _∞ ±0.3 dB averaged over BW _{Config} GSM cell	
Ês / N _∞ ±0.3 dB averaged over BW _{config}	I / AVV(¬N
averaged over BW _{Config} GSM cell	.,,,,,,,
GSM cell	
0:	
Signal level ±0.7 dB Cell 2 (GSM) has only the wanted	l signal.
without AWGN	
4.4.2 E-UTRAN TDD - GSM cell re- Same as 4.4.1	
selection	
4.5.1.1 RRC IDLE / E-UTRAN to HRPD	
Cell re-selection / E-UTRAN FDD - HRPD N _∞ ±0.7 dB averaged N _∞ is the AWGN on cell 1 freque	
cell re-selection: HRPD is of lower priority	I / AWGN
Ês / N _∞ ±0.3 dB	
averaged over BW _{Config}	
HRPD cell I _∞ is the AWGN on cell 2 (HRPD)	frequency
$l_{oc} \pm 2.0 \text{ dB}$ l_{or} / l_{oc} is the ratio of cell 2 signal /	
$\hat{l}_{of} / l_{oc} \pm 0.7 \text{ dB}$	
4.5.2.1 E-UTRAN TDD - HRPD Cell Same as 4.5.1.1 Same as 4.5.1.1	
Reselection: HRPD is of Lower Priority	
5.1.1 E-UTRAN FDD-FDD Handover intra N _∞ ±1.0 dB averaged Note:	. /
frequency case $\frac{1}{2}$ over BW _{Config} $\frac{1}{2}$ 1	
$\hat{E}s_1/N_{\infty} \pm 0.3 \text{ dB}$ $\hat{E}s_2/N_{\infty}$ is the ratio of cell 2 signal	al / AWGN
averaged over BW _{Config}	
$\hat{E}s_2/N_{\infty} \pm 0.3 dB$	
averaged over BW _{Config}	
5.1.2 E-UTRAN TDD-TDD Handover intra Same as 5.1.1 Same as 5.1.1	
frequency case	
5.1.3 E-UTRAN FDD-FDD Handover inter Same as 4.2.3 Same as 4.2.3	
frequency case	
5.1.4 E-UTRAN TDD-TDD Handover inter Same as 4.2.3 Same as 4.2.3	
frequency case	
5.1.5 E-UTRAN FDD-FDD inter-frequency Same as 4.2.3 Same as 4.2.3	
Handover with unknown target cell	
5.1.6 E-UTRAN TDD-TDD inter-frequency Same as 4.2.3 Same as 4.2.3	
Handover with unknown target cell	
5.1.7 E-UTRAN FDD-TDD Handover inter Same as 4.2.3 Same as 4.2.3	
frequency case	
5.1.8 E-UTRAN TDD-FDD Handover inter Same as 4.2.3 Same as 4.2.3	
frequency case	
5.2.1 E-UTRAN FDD - UTRAN FDD E-UTRA cell Notes:	
handover $N_{\infty} \pm 0.7 dB$ averaged	
over BW _{Config} N _{oc} is the AWGN on cell 1 (E-UTF	
$ \hat{E}s /N_{\infty} \pm 0.3 \text{ dB}$ $ \hat{E}s /N_{\infty}$ is the ratio of cell 1 signal	I / AWGN
averaged over BW _{Config}	
Jan 1 Jan 1	
UTRA cell	
$I_{\infty} \pm 0.7 \text{ dB}$ I_{∞} is the AWGN on cell 2 (UTRA)	frequency
$l_{or} / l_{oc} \pm 0.3 \text{ dB}$ l_{or} / l_{oc} is the ratio of cell 2 signal /	
CPICH Ec/l _{or} ±0.1 dB	
assigned to the CPICH Physical of	cnannel
5.2.2 E-UTRAN TDD - UTR AN FDD Same as 5.2.1 Same as 5.2.1	
handover	
5.2.3 E-UTRAN FDD - GSM handover E-UTRA Cell Note:	
N _∞ ±1.0 dB averaged N _∞ is the AWGN on cell 1 freque	ncy
over BW _{Config} $\hat{E}s / N_{\infty}$ is the ratio of cell 1 signal	
Ês / N _∞ ±0.3 dB	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
averaged over BW _{Config}	
O 11 O (OOM)	ا ماساما
GSM cell Cell 2 (GSM) has only the wanted	ı sıgnal,
Signal level ±0.7 dB without AWGN	

S.2.4 E-UTRA TDD – UTRA TDD handover No. ± 10.7 GB averaged No. ± 10.7 GB averaged No. ± 10.7 GB No.
over BWComfig Es / No. ± 0.3 dB averaged over BWComfig UTRA cell loc ± 0.7 dB loc / Loc / De / De / De / De / De / De / De / D
E _c / N _{oc} ± 0.3 dB averaged over BW _{Corfig} Loc is the AWON on cell 2 frequency Loc / No. is the ratio of cell 2 signal / AWON PCCPCH_E, /Loc is the ratio of cell 2 signal / AWON PCCPCH_E, /Loc is the ratio of cell 2 signal / AWON PCCPCH_E, /Loc is the ratio of cell 2 signal / AWON PCCPCH_E, /Loc is the ratio of cell 2 power assigned to the P-CCPCH physical channel. DwPCH_E, /Loc is the fraction of cell 2 power assigned to the DwPCH channel DwPCH_E, /Loc is the fraction of cell 2 power assigned to the DwPCH channel Same as 5.2.4 Same as 5.2.3 Same as 5.2
averaged over BW _{Corflig} UTRA cell by ± 0.7 dB by P-CCPCH_E, / by ± 0.7 dB p-CCPCH_E, / by ± 0.7 dB p-CCPCH_E, / by ± 0.1 dB p-CCPCH_E, / by ± 0
UTRA cell
UTRA cell
UTRA cell log ± 0.7 dB log + 0.1 dB log + 0.2 dB log + 0.2 dB log + 0.2 dB log + 0.2 dB log + 0.3 dB log + 0.2 dB log + 0.3 dB log + 0
loc ± 0.7 dB lor / loc ± 0.3 dB P-CCPCH_Ec/lor ± 0.1 dB P-CCPCH_Ec/lor ± 0.1 dB DWPCH_Ec/lor
P-CCPCH_E _c /I _{or} ± 0.1 dB DwPCH_E _c /I _{or} ± 0.1 dB DxPCH_E _c /I _{or} ± 0.1 dB S.2.5 E-UTRA FDD – UTRA TDD handover Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Note:
dB DwPCH_Ec/lor ± 0.1 dB DwPCH_Ec/lor ± 0.1
DwPCH_E _c /I _{or} ± 0.1 dB 5.2.5 E-UTRA FDD – UTRA TDD handover 5.2.6 E-UTRA TDD - GSM handover 5.2.7 E-UTRAN FDD – UTRAN FDD handover: unknown target cell Dv _c ± 0.7 dB averaged over BW _{Corelig} Es / N _{or} ± 0.3 dB averaged over BW _{Corelig} Es / N _{or} ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB CPICH E _c /Io _r ± 0.1 dB I _{or} /Io _c ± 0.3 dB I
dB Same as 5.2.4 Same as 5.2.4 Same as 5.2.4 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Same as 5.2.3 Note: Noc ±0.7 dB averaged over BWConfig Es / Noc ±0.3 dB averaged over BWConfig Lor. 2 signal/AWGN Same as 5.2.3 Same as 5.
5.2.5 E-UTRA FDD - UTRAN FDD 5.2.6 E-UTRA FDD - UTRAN FDD handover: unknown target cell N _{cc} ±0.7 dB averaged over BWCorflig Es / N _{cc} ±0.3 dB averaged over BWCorflig Es / N _{cc} ±0.3 dB lor/loc ±0.3 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB 5.2.9 E-UTRAN TDD - GSM handover: unknown target cell 5.2.9 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.3.1 RRC CONNECTED / Handover from E-UTRAN to non-3GPP RATs / E-UTRAN FDD - HRPD handover 5.3.1 RRC CONNECTED / Handover from E-UTRAN to non-3GPP RATs / E-UTRAN FDD cell loc ±0.7 dB averaged over BWCorflig Es / N _{cc} ±0.3 dB averaged over BWCorflig Es / N _{cc} is the ratio of cell 2 signal/AWGN Note: N _{cc} is the AWGN on cell 1 frequency Es / N _{cc} is the ratio of cell 2 signal/AWGN Note: N _{cc} is the AWGN on cell 1 frequency Es / N _{cc} is the ratio of cell 2 signal/AWGN Note: N _{cc} is the AWGN on cell 2 (HRPD) frequency Es / N _{cc} is the averaged over BwCorflig Es / N _{cc} is the averaged over BwCorflig Es / N _{cc} is the averaged over BwCorflig Es / N _{cc} is the averaged over BwCorflig Es / N _{cc} is the averaged over BwCorflig Es / N _{cc} is the ave
5.2.6 E-UTRANTDD - GSM handover 5.2.7 E-UTRAN FDD - UTRAN FDD handover: unknown target cell No ±0.7 dB averaged over BWConfig Lv±0.7 dB lo√10c ±0.3 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH ANDON target cell 5.2.9 E-UTRAN TDD - GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 6.2.17 E-WCHAN TDD - UTRAN TDD HO test: unknown target cell 6.3.1 RRC CONNECTED / Handover from E-UTRAN to non-3GPP RATS / E-UTRAN FDD - HRPD handover 6.2.10 E-WCHANGE / E-WCHANG
E-UTRA cell Noc ±0.7 dB averaged over BWcordig Es / Noc ±0.3 dB averaged over BWcordig Es / Noc ±0.3 dB averaged over BWcordig Es / Noc is the ratio of cell 1 signal / AWGN
E-UTRA cell Noc ±0.7 dB averaged over BWcordig Es / Noc ±0.3 dB averaged over BWcordig Es / Noc ±0.3 dB averaged over BWcordig Es / Noc is the ratio of cell 1 signal / AWGN
Nome ±0.7 dB averaged over BWconfig Es / Nome ±0.3 dB averaged over BWconfig Es / Nome ±0.3 dB averaged over BWconfig Es / Nome ±0.3 dB averaged over BWconfig Es / Nome ±0.3 dB cPICH Ec/lor ±0.1 dB cPICH Ec/lor is the fraction of Cell 2 signal/AWGN cPICH Ec/lor is the ratio of Cell 2 signal/AWGN cPICH Ec/lor is the fraction on Cell 2 power assigned to the CPICH physical channel same as 5.2.3 same as 5.
over BWconfig Ês / N₀c ±0.3 dB averaged over BWconfig Ês / N₀c ±0.7 dB l₀c±0.7 dB loc is the AWGN on Cell 2 (UTRA) frequency lor/loc is the ratio of Cell 2 signal/AWGN CPICH Ec/lor is the fraction on Cell 2 power assigned to the CPICH physical channel Same as 5.2.3 Same as 5.2
Es / Noc ±0.3 dB averaged over BWCornfig
averaged over BWconfig UTRA cell Ioc ±0.7 dB Iof/Ioc ±0.3 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor is the ratio of Cell 2 signal/AWGN CPICH Ec/lor is the ratio of Cell 2 power assigned to the CPICH physical channel 5.2.9 E-UTRAN TDD – GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 0 UTRA TDD cell Ioc ±0.7 dB Ior/Ioc ±0.3 dB PCCPCH_Ec /Ior ±0.1 dB DWPCH_Ec /Ior ±0.1 dB DWPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DWPCH physical channel DWPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DWPCH physical channel DWPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DWPCH physical channel DWPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DWPCH physical channel DWPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DWPCH physical channel Note: Not
UTRA cell lox ±0.7 dB lox/lox ±0.3 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor ±0.1 dB CPICH Ec/lor is the fraction on Cell 2 power assigned to the CPICH physical channel 5.2.8 E-UTRAN FDD - GSM handover: unknown target cell S.2.9 E-UTRAN TDD – GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell S.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell S.2.3 dB averaged over BWconfig Es / Nox ±0.3 dB averaged over BWconfig UTRATDD cell lox ±0.7 dB lor/loc ±0.3 dB PCCPCH_Ec /lor ±0.1 dB DwPCH_Ec
I _∞ ±0.7 dB I _{of} /I _{oc} ±0.3 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior is the ratio of Cell 2 signal/AWGN CPICH Ec/Ior is the fraction on Cell 2 power assigned to the CPICH physical channel Same as 5.2.3 Same as 5
I _∞ ±0.7 dB I _{of} /I _{oc} ±0.3 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior is the ratio of Cell 2 signal/AWGN CPICH Ec/Ior is the fraction on Cell 2 power assigned to the CPICH physical channel Same as 5.2.3 Same as 5
I _{or} /I _{oc} ±0.3 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior is the fraction on Cell 2 power assigned to the CPICH physical channel
I _{or} /I _{oc} ±0.3 dB CPICH Ec/Ior ±0.1 dB CPICH Ec/Ior is the fraction on Cell 2 power assigned to the CPICH physical channel
CPICH Ec/lor ±0.1 dB CPICH Ec/lor is the fraction on Cell 2 power assigned to the CPICH physical channel 5.2.8 E-UTRAN FDD - GSM handover: unknown target cell 5.2.9 E-UTRAN TDD - GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell Noc ±0.7 dB averaged over BWconfig Es / Noc ±0.3 dB averaged over BWconfig UTRA TDD cell loc ±0.7 dB lor/loc ±0.3 dB PCCPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the PCCPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel Note:
assigned to the CPICH physical channel 5.2.8 E-UTRAN FDD - GSM handover: unknown target cell 5.2.9 E-UTRAN TDD – GSM handover: unknown target cell 5.2.10 E-UTRAN TDD – UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD – UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRAN TDD – UTRAN TDD HO test: unknown target cell 5.2.10 E-UTRA Cell Noc ±0.3 dB averaged over BWcornfig E / Noc ±0.3 dB pCCPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel Noc ±0.7 dB averaged over BWcornfig Ês / Noc ±0.7 dB averaged over BWcornfig Ês / Noc ±0.7 dB averaged over BWcornfig Ês / Noc is the AWGN on cell 1 frequency Note: Noc is the AWGN on cell 1 frequency is the fraction of Cell 2 power assigned to the DwPCH physical channel Note: Noc is the AWGN on cell 1 frequency is / Noc is the ratio of cell 1 signal / AWGN Note: Noc is the AWGN on cell 2 (HRPD) frequency is / Noc is the ratio of cell 1 signal / AWGN
5.2.8 E-UTRAN FDD - GSM handover: unknown target cell 5.2.9 E-UTRAN TDD - GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell Description of Cell 2 signal/AWGN E-UTRA TDD cell loc ±0.7 dB lor/loc ±0.3 dB PCCPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the PCCPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 is th
unknown target cell 5.2.9 E-UTRAN TDD – GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell N _∞ ±0.7 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB lor/loc ±0.3 dB lor/loc ±0.3 dB DwPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor ±0.1 dB 5.3.1 RRC CONNECTED / Handover from E-UTRAN to non-3GPP RATs / E-UTRAN FDD – HRPD handover E-UTRAN to non-3GPP RATs / E-UTRAN FDD – HRPD handover Averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ ±0.3 dB averaged over BW _{Conflig} Es / N _∞ is the AWGN on cell 1 frequency Es / N _∞ is the AWGN on cell 1 signal / AWGN Noc is the AWGN on cell 2 (HRPD) frequency Soc is the AWGN on cell 2 signal / AWGN
5.2.9 E-UTRAN TDD – GSM handover: unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell C-UTRA cell N _∞ ±0.7 dB averaged over BW _{Conflig} Ês / N _∞ ±0.3 dB averaged over BW _{Conflig} UTRA TDD cell I _∞ ±0.7 dB Ior/Ioc ±0.3 dB PCCPCH_Ec /Ior ±0.1 dB DwPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /Ior is the fraction of Cell 2 power assigned to the DwPCH physical channel Noste: Noste: Noc is the AWGN on Cell 1 frequency Ior/Ioc is the ratio of Cell 2 power assigned to the DwPCH physical channel Noste: Noste: Noc is the AWGN on cell 1 frequency Es / Noc is the ratio of cell 1 signal / AWGN Note: Noc is the AWGN on Cell 2 (UTRA TDD) frequency Ior/Ioc is the Faction of Cell 2 power assigned to the DwPCH physical channel Note: Noc is the AWGN on Cell 2 (UTRA TDD) frequency Ior/Ioc is the Faction of Cell 2 power assigned to the DwPCH physical channel Note: Noc is the AWGN on Cell 1 frequency Es / N _{oc} is the AWGN on Cell 1 signal / AWGN Ior is the AWGN on Cell 1 signal / AWGN Ior is the AWGN on Cell 2 (HRPD) frequency Es / N _{oc} is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Ior is the AWGN on Cell 2 (HRPD) frequency Io
unknown target cell 5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell Cover BWConfig Es / Noc ±0.3 dB averaged over BWConfig Es / Noc ±0.3 dB lor/loc ±0.3 dB PCCPCH_Ec /lor ±0.1 dB DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel DwPCH_Ec /lor is the fraction of Cell 2 power assigned to the DwPCH physical channel Note: Note: Note: Note:
5.2.10 E-UTRAN TDD - UTRAN TDD HO test: unknown target cell Noc ±0.7 dB averaged over BWconfig
test: unknown target cell $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c} \text{over BW}_{\text{Conflig}} \\ \hat{\mathbb{E}}\text{s} \ / N_{\text{oc}} \pm 0.3 \ \text{dB} \\ \text{averaged over BW}_{\text{Conflig}} \\ \\ \text{UTRA TDD cell} \\ \text{I}_{\text{loc}} \pm 0.7 \ \text{dB} \\ \text{Ior} \ / \text{loc} \pm 0.3 \ \text{dB} \\ \text{PCCPCH}_{\text{Ec}} \ / \text{lor} \pm 0.1 \\ \text{dB} \\ \text{DwPCH}_{\text{Ec}} \ / \text{lor} \pm 0.1 \\ \text{dB} \\ \text{DwPCH}_{\text{Ec}} \ / \text{lor} \pm 0.1 \\ \text{dB} \\ \text{DwPCH}_{\text{Ec}} \ / \text{lor} \text{is the AWGN on Cell 2 (UTRA TDD)} \\ \text{frequency} \\ \text{Ior} \ / \text{loc} \text{ is the AWGN on Cell 2 (UTRA TDD)} \\ \text{frequency} \\ \text{Ior} \ / \text{loc} \text{ is the ratio of Cell 2 signal} \ / \text{AWGN} \\ \text{PCCPCH}_{\text{Ec}} \ / \text{lor} \text{ is the fraction of Cell 2 power} \\ \text{assigned to the PCCPCH physical channel} \\ \text{DwPCH}_{\text{Ec}} \ / \text{lor} \text{ is the fraction of Cell 2 power} \\ \text{assigned to the DwPCH physical channel} \\ \text{DwPCH}_{\text{Ec}} \ / \text{lor} \text{ is the AWGN on cell 1 frequency} \\ \text{Solution} \ / Solutio$
$\begin{array}{c} \text{over BW}_{\text{Conflig}} \\ \hat{\mathbb{E}} \text{s} / N_{\text{oc}} \pm 0.3 \text{ dB} \\ \text{averaged over BW}_{\text{Conflig}} \\ \\ \text{UTRA TDD cell} \\ \text{loc} \pm 0.7 \text{ dB} \\ \text{lor} / \text{loc} \pm 0.3 \text{ dB} \\ \text{pCCPCH}_{\text{Ec}} / \text{lor} \pm 0.1 \\ \text{dB} \\ \text{DwPCH}_{\text{Ec}} / \text{lor} \text{ is the AWGN on Cell 2 (UTRA TDD)} \\ \text{frequency} \\ \text{lor} / \text{loc} \text{ is the AWGN on Cell 2 (UTRA TDD)} \\ \text{frequency} \\ \text{lor} / \text{loc} \text{ is the ratio of Cell 2 signal/AWGN} \\ \text{PCCPCH}_{\text{Ec}} / \text{lor} \text{ is the fraction of Cell 2 power} \\ \text{assigned to the PCCPCH physical channel} \\ \text{DwPCH}_{\text{Ec}} / \text{lor} \text{ is the fraction of Cell 2 power} \\ \text{assigned to the DwPCH physical channel} \\ \text{Note:} \\ Not$
averaged over BWconfig UTRA TDD cell $I_{loc} \pm 0.7$ dB $I_{loc} \pm 0.3$ dB $I_{loc} \pm 0.$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
$ \begin{array}{llllllllllllllllllllllllllllllllllll$
E-UTRAN to non-3GPP RATs / E-UTRAN $N_{\infty} \pm 0.7$ dB averaged over BW_{Config} $Es / N_{\infty} \pm 0.3$ dB averaged over BW_{Config} $Es / N_{\infty} \pm 0.3$ dB averaged over BW_{Config} $Es / N_{\infty} = 1.5$ loc is the AWGN on cell 1 frequency $Es / N_{\infty} = 1.5$ is the AWGN on cell 1 frequency $Es / N_{\infty} = 1.5$ is the AWGN on cell 2 (HRPD) frequency $Es / N_{\infty} = 1.5$ loc is the AWGN on cell 2 signal / AWGN
E-UTRAN to non-3GPP RATs / E-UTRAN $N_{\infty} \pm 0.7$ dB averaged over BW_{Config} $Es / N_{\infty} \pm 0.3$ dB averaged over BW_{Config} $Es / N_{\infty} \pm 0.3$ dB averaged over BW_{Config} $Es / N_{\infty} = 1.5$ loc is the AWGN on cell 1 frequency $Es / N_{\infty} = 1.5$ is the AWGN on cell 1 frequency $Es / N_{\infty} = 1.5$ is the AWGN on cell 2 (HRPD) frequency $Es / N_{\infty} = 1.5$ loc is the AWGN on cell 2 signal / AWGN
FDD – HRPD handover
averaged over BW_{Config} $\frac{HRPD\ cell}{I_{oc}\ \pm 2.0\ dB} \qquad \qquad I_{oc}\ is\ the\ AWGN\ on\ cell\ 2\ (HRPD)\ frequency}{I_{or}\ /\ I_{oc}\ is\ the\ ratio\ of\ cell\ 2\ signal\ /\ AWGN}$
$\frac{\text{HRPD cell}}{\text{I}_{\text{oc}} \pm 2.0 \text{ dB}} \qquad \qquad \text{I}_{\text{oc}} \text{ is the AWGN on cell 2 (HRPD) frequency} \\ \text{I}_{\text{or}} + \text{I}_{\text{oc}} \text{ is the ratio of cell 2 signal / AWGN}$
l _{oc} ±2.0 dB l _{or} / l _{oc} is the ratio of cell 2 signal / AWGN
l _{oc} ±2.0 dB l _{or} / l _{oc} is the ratio of cell 2 signal / AWGN
I_{lor} / I_{lor} ± 0.7 dB I_{lor}
1011100
5.3.5 E-UTRAN TDD - HRPD handover Same as 5.3.1 Same as 5.3.1
6.1.1 E-UTRAN FDD Intra-frequency RRC Same as 5.1.1 Same as 5.1.1
Re-establishment
6.1.2 E-UTRAN FDD Inter-frequency RRC N _{oc1} ±1.0 dB averaged Note:
Re-establishment over BW _{Config} N _{oc1} is the AWGN on cell 1 frequency
$\hat{E}_{s_1}/N_{oc1} \pm 0.3 \text{ dB}$ \hat{E}_{s_1}/N_{oc1} is the ratio of cell 1 signal / AWGN
averaged over BW _{Config} N_{oc2} is the AWGN on cell 2 frequency
$N_{oc2} \pm 1.0$ dB averaged $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
over BW _{Config}
$\hat{E}s_2/N_{\infty 2}\pm0.3 dB$
averaged over BW _{Config}
6.1.3 E-UTRAN TDD Intra-frequency RRC Same as 6.1.1 Same as 6.1.1
Re-establishment
6.1.4 E-UTRAN TDD Inter-frequency RRC Same as 6.1.3 Same as 6.1.3
Re-establishment

6.2.1 E-UTRAN FDD - Contention Based	Test 1 and Test 2:	Note:
Random Access Test	N _{oc} ±0.7 dB averaged	\hat{E}_{s_1}/N_{oc1} is the ratio of cell 1 signal / AWGN
Trandom 760033 TOST	over BW _{Config}	LS / 1400 13 the ratio of cell 1 Signal / / Well
	Ês / N _{oc} ±0.3 dB	$T_S = 1/(15000 \times 2048)$ seconds, the basic
	averaged over BW _{Config}	timing unit defined in TS 36.211 [9]
	general grade and a recoming	
	Uplink absolute power	
	measurement ±0.7	
	dB	
	Uplink relative power	
	measurement ±0.7 dB	
	a= 11 !! 1 · 1	
	±3Ts Uplink signal	
	transmit timing relative to downlink	
6.2.2 E-UTRAN FDD - Non Contention	Same as 6.2.1	Same as 6.2.1
Based Random Access Test	Same as 6.2.1	Same as 6.2.1
6.2.3 E-UTRAN TDD - Contention Based	Same as 6.2.1	Same as 6.2.1
Random Access Test	Same as 0.2.1	Same as 0.2.1
6.2.4 E-UTRAN TDD - Non Contention	Same as 6.2.1	Same as 6.2.1
Based Random Access Test	Carrio ao 0.2.1	0.2.1
6.3.1 Redirection from E-UTRAN FDD to	E-UTRA cell	Note:
UTRAN FDD	N _∞ ±1.0 dB averaged	
	over BW _{Config}	N _∞ is the AWGN on cell 1 frequency
	Ês / N _∞ ±0.3 dB	Ês / N₀c is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	
	UTRA cell	
	l _∞ ±0.7 dB	loc is the AWGN on Cell 2 (UTRA) frequency
	$I_{or}/I_{oc} \pm 0.3 \text{ dB}$	lor/loc is the ratio of Cell 2 signal/AWGN
	CPICH Ec/lor ±0.1 dB	CPICH Ec/lor and SCH_Ec/lor are the
	SCH Ec/lor ±0.1 dB	fractions of Cell 2 power assigned to the
		CPICH and SCH physical channels
6.3.2 Redirection from E-UTRAN TDD to UTRAN FDD	Same as 6.3.1	Same as 6.3.1
6.3.3 Redirection from E-UTRAN FDD to	E-UTRA Cell	Note:
GERAN when System Information is	N _{oc} ±1.0 dB averaged	N₀c is the AWGN on cell 1 frequency
provided	over BW _{Config}	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	Ês / N _{oc} ±0.3 dB	
	averaged over BW _{Config}	
	GSM cell	Cell 2 (GSM) has only the wanted signal,
	Signal level ±0.7 dB	without AWGN
6.3.4 Redirection from E-UTRAN TDD to	Same as 6.3.3	Same as 6.3.3
GERAN when System Information is		
provided 6.3.5 E-UTRATDD RRC connection	E-UTRA cell	Note:
release redirection to UTRATDD	N _{oc} ±1.0 dB averaged	N _∞ is the AWGN on cell 1 frequency
Telegae redirection to OTNA TDD	over BW _{Config}	Îs / N _∞ is the ratio of cell 1 requercy Îs / N _∞ is the ratio of cell 1 signal / AWGN
	Ês / N _{oc} ±0.3 dB	LS / 1400 IS THE TATIO OF CELL I SIGNAL / AVVOIN
	averaged over BW _{Config}	
	The state of the s	
	UTRA cell	I₀c is the AWGN on cell 2 frequency
	l _{oc} ±0.7 dB	\hat{I}_{or} / I_{oc} is the ratio of cell 2 signal / AWGN
	$I_{or}/I_{oc} \pm 0.3 \text{ dB}$	PCCPCH E _c / I _{or} is the fraction of cell 2 power
	PCCPCH_Ec/lor ±0.1	assigned to the PCCPCH Physical channel
	dB	DwPCH_Ec/lor is the fraction of cell 2 power
	DwPCH_Ec/lor ±0.1 dB	9
6.3.6 E-UTRA FDD RRC connection	Same as 6.3.5	Same as 6.3.5
release redirection to UTRATDD	0	0
6.3.7 E-UTRATDD RRC connection	Same as 6.3.5	Same as 6.3.5
release redirection to UTRATDD without		
SI provided	Comp. co. C. C. F.	Comp on C 2.5
6.3.8 E-UTRA FDD RRC connection release redirection to UTRA TDD without	Same as 6.3.5	Same as 6.3.5
SI provided		
or provided	1	

C.O.O.D. direction from E.HTDAN EDD to	0	0
6.3.9 Redirection from E-UTRAN FDD to	Same as 6.3.1	Same as 6.3.1
UTRAN FDD without System Information		
6.3.10 Redirection from E-UTRAN FDD to	Same as 6.3.3	Same as 6.3.3
GERAN when System Information is not		
provided		
6.3.11 Redirection from E-UTRAN TDD to	Same as 6.3.3	Same as 6.3.3
GERAN when System Information is not		
provided		
6.3.12 E-UTRAN TDD RRC connection	Same as 6.3.1	Same as 6.3.1
release redirection to UTRAN FDD without		
SI provided		
7.1.1 E-UTRAN FDD - UE Transmit Timing	N _{oc} ±3.0 dB averaged	Note:
Accuracy	over BW _{Config}	Ês / N _{oc} is the ratio of cell 1 signal / AWGN
	Ês / N _∞ ±0.3 dB	
	±3Ts Uplink signal	$T_S = 1/(15000 \times 2048)$ seconds, the basic
	transmit timing relative	timing unit defined in TS 36.211 [9]
	to downlink	
	±0.5Ts relative during	
	UE timing adjustment	
7.1.2 E-UTRAN TDD - UE Transmit Timing	Same as 7.1.1	Same as 7.1.1
Accuracy		
7.2.1 E-UTRAN FDD - UE Timing Advance	N _{oc1} ±3.0 dB averaged	Note:
Adjustment Accuracy	over BW _{Config}	Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
,,	Ês ₁ / N _{oc1} ±0.3 dB	
		The timing unit $T_S = 1/(15000 * 2048)$
	Timing Advance	seconds, as defined in TS.36.211 [9]
	Adjustment: ±0.5T _s	00001100, 000 00111100 111 10.00.211 [0]
7.2.2 E-UTRAN TDD - UE Timing Advance	Same as 7.2.1	Same as 7.2.1
Adjustment Accuracy	007.2.1	Carrio ao 7.2.1
/ wjacemont / woundby	1	

Test for Out-of-sync AWGN conditions, but all the standard of	7.3.1 E-UTRAN FDD Radio Link Monitoring	± 0.6dB (Subtest 1&2,	Subtests 1 & 2:
1. Signal-to-noise ratio uncertainty 2. Effect of AWCN flatness and signal flatness letters and 2 are assumed to be uncorrelated so can be root sum squared: 4. 0.9dB (Subtest 4, Fading conditions, two antenna transmission) ± 0.9dB (Subtest 4, Fading conditions, two antenna transmission) 1. Signal-to-noise ratio uncertainty contribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty or ontribution. Test System uncertainty = SQRT (Signal-to-noise ratio uncertainty) = (0.25 x AWCN flatness and signal flatness ± 2.0 dB AWCN flatness and signal flatness ± 2.0 dB AWCN flatness and signal flatness 2. Fading profile power uncertainty = SQRT (Signal-to-noise ratio uncertainty) = (1.25 x AWCN flatness and signal flatness) (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness and signal flatness = (1.25 x AWCN flatness = (1.25 x AWCN flatness = (1.25 x AWCN flatness = (1.25 x AWCN flatness = (1.25 x AWCN flatness = (1.25 x AWCN flatness			
\$\frac{\text{2.0.3dB (Subtest 3, Fading conditions, single antenna transmission)}}{\text{4.0.9dB (Subtest 4, Fading conditions, two antenna transmission)}} \text{4.0.9dB (Subtest 3, Fading conditions, two antenna transmission)}} \text{4.0.000} \text{5.000} \text{4.0.000} \text{5.000} \text{5.000} 5		,	
single antenna transmission) ± 0.9dB (Subtest 4, Fading conditions, two antenna transmission) ± 0.9dB (Subtest 4, Fading conditions, two antenna transmission) ± 0.9dB (Subtest 4, Fading conditions, two antenna transmission) **Example of the state o		± 0.8dB (Subtest 3,	
transmission) ### double of the control of the con		Fading conditions,	2. Effect of AWGN flatness and signal flatness
so can be roots win squared: Agring conditions, two antenna transmission) **Pading conditions, two antenna transmission in the control of th		single antenna	_
# 0.94B (Subtest 4, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile power uncertainty ± 0.5 dB (Subtest 1, Fading profile profile uncertainty ± 0.5 dB (Subtest 1, Fading profile profile uncertainty ± 0.5 dB (Subtest 1, Fading profile profile uncertainty ± 0.5 dB (Subtest 1, Fading profile profile uncertainty ± 0.5 dB (Subtest 1, Fading profile profile uncertainty ± 0.5 dB (Subtest 1, Fading profile uncertain		transmission)	Items 1 and 2 are assumed to be uncorrelated
Fading conditions, two antenna transmission) Fading conditions, with antenna transmission) Fading conditions, with antenna transmission) Fading conditions, with antenna transmission antenna transmission) Fading conditions, with antenna transmission antenna transmission) Fading conditions, with antenna transmission antenna transmission antenna transmission antenna transmission antenna transmiss		·	so can be rootsum squared:
antenna transmission) antenna transmission) factor of x 0.25 for the uncertainty contribution: factor of x 0.25 for the uncertainty = SQRT (Signal-to-noise ratio uncertainty ± 0.25 x AWGN flatness and signal flatness) ³ Signal-to-noise ratio uncertainty ± 0.3 dB AWGN flatness and signal flatness ± 2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty with signal flatness three quantities: 1. Signal-to-noise ratio uncertainty with signal flatness terms 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty ⁴ Signal-to-noise ratio uncertainty ⁴ Signal-to-noise ratio uncertainty ⁵ Signal-to-noise ratio uncertainty ± 0.3 dB Signal-to-noise ratio uncertainty ± 0.5 dB Fading profile power uncertainty ⁵ Signal-to-noise ratio variation ± 0.5 dB Fading profile power uncertainty ± 0.5 dB Fading profile power uncertainty ± 0.5 dB Fading profile uncertainty of ± 0.7 for two Tx. Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ± 0.7 for two Tx. Subtest 1: Subtest 1: Subtest 1: Subtest 1: Subtest 2: See 7.3.1 subtest 4 Subtest 2: See 7.3.1 subtest 4 Subtest 2: See 7.3.1 subtest 4 Subtest 2: See 7.3.1, subtest 1 Fading conditions, two antenna transmission) ± 0.68B (Subtest 1, Fading conditions, two antenna transmission) ± 0.68B (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 1.068B (Subtest 1, Fading conditions, two antenna transmission) ± 0.68B (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 2.068B (Subtest 2, AWGN conditions) 2.0.68B (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 2.068B (Subtest 2, AWGN conditions) 2.0.68B (Subtest 3, Subtest 1) 2.0.68B (Subtest 2, AWGN conditions) 2.0.68B (Subtest			
Test System uncertainty = 0.28 f. XM/SN flatness and signal flatness) \$\frac{3}{2}\$ Signal-to-noise ratio uncertainty ± 0.28 dB AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 10.3 dB AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2.5 adding profile power uncertainty 3. Effect of AWGN flatness and signal flatness tltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty = 50RT (Average signal-to-noise ratio uncertainty + 50gnal-to-noise ratio uncertainty + 4.50gnal-to-noise ratio uncertainty + 4.50gnal-to-noise ratio uncertainty + 2.0 adB Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile uncertainty		Fading conditions, two	effect on the required SNR, so use sensitivity
noise ratio uncertainty \$\frac{4}{2}\$ C.25 x AV/GN flatness and signal flatness) \$\frac{7}{2}\$ Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty \$2. Fading profile power uncertainty \$3. Effect of AV/GN flatness and signal flatness items 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty \$2. Fading profile power uncertainty \$4. Signal-to-noise ratio variation \$4. Signal-to-noise ratio variation \$4. Signal-to-noise ratio variation \$4. Signal-to-noise ratio variation \$4.		antenna transmission)	
flatness and signal flatness) Signal-to-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness and signal flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness 1. Signal-to-noise ratio uncertainty 3. Effect of AWGN flatness 3. Effec			
Signal-o-noise ratio uncertainty ±0.3 dB AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effect of AWGN flatness and signal flatness tems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squand: Test System uncertainty ≤ SRT (Average signal-to-noise ratio uncertainty) ≤ SRT (
AWGN flatness and signal flatness ±2.0 dB Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effect of AWGN flatness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be not sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty) = SQRT (Average signal-to-noise ratio uncertainty) + Signal-to-noise ratio uncertainty) + Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.3 dB signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty) + Signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile uncertainty ±0.5 dB Fading profile uncertainty ±0.5 dB Fading profile uncertainty ±0.5 dB Fading profile uncertainty ±0.5 dB Fading profile uncertainty ±0.7 for two Tx. Subtest 1: Subtest 1: Fading conditions, single antenna transmission) 2 ± 0.9dB (Subtest 1, Fading conditions, two antenna transmission) Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring ±0.6dB (Subtest 1, Fading conditions) ±0.9dB (Subtest 1, Fading conditions, wo antenna transmission) ±0.6dB (Subtest 2, AWGN conditions) ±0.6dB (Subtest 1, Fading conditions, wo antenna transmission) ±0.6dB (Subtest 2, AWGN) 5ee 7.3.1, subtest 1 Subtest 1: See 7.3.1, subtest 1 Subtest 2: See 7.3.1, subtest 1 Subtest 3: See 7.3.1, subtest 1 Subtest 3: See 7.3.1, subtest 1 Subtest 3: See 7.3.1, subtest 1			
Subtests 3: Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effect of AWOK flatness and signal flatness terms of the uncorrelated so can be root sum squared: Test System uncertainty 2-4 Signal-to-noise ratio uncertainty 4-5 Signal-to-noise ratio uncertainty 4-5 Signal-to-noise ratio uncertainty 4-5 Signal-to-noise ratio uncertainty 4-0.3 dB Signal-to-noise ratio uncertainty 4-0.5 dB Fading profile power uncertainty 4-0.5 dB Fading profile power uncertainty 4-0.5 dB Fading profile power uncertainty 4-0.5 dB Fading profile uncertainty 4-0.5 dB Subtest 1. 5 See 7.3.1 subtest 3 Subtest 1: 5 See 7.3.1 subtest 3 Subtest 1: 5 See 7.3.1 subtest 4 Subtest 2: 4-0.6 dB (Subtest 1, Fading conditions, two antenna transmission) 4-0.6 dB (Subtest 1, Fading conditions) 5 See 7.3.1, subtest 1 Subtest 1: 5 See 7.3.1, subtest 1 Subtest 1: 5			
Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effector AWGN flatiness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty 2 + Signal-to-noise ratio uncertainty 2 + Signal-to-noise ratio variation 2 + 5 GRT (Average signal-to-noise ratio uncertainty 2 + Signal-to-noise ratio variation 4.0.5 dB Fading profile power uncertainty 3 + Signal-to-noise ratio variation 4.0.5 dB Fading profile power uncertainty 2 + 0.5 dB for single TX Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Fading conditions, single anterna transmission) ± 0.8dB (Subtest 1, Fading conditions, two anterna transmission) ± 0.9dB (Subtest 2, Fading conditions, two anterna transmission) 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.9 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.1 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.2 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.3 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.4 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 8 Expression Test for Description Test for Out-of-sync in DRX 8 Expression Test for Description Test for Out-of-sync in DRX 8 Expression Test for Description Test for Description Test for Description Test for Out-of-sync			AVVGN flatness and signal flatness ±2.0 dB
Overall system uncertainty for fading condition comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effector AWGN flatiness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty 2 + Signal-to-noise ratio uncertainty 2 + Signal-to-noise ratio variation 2 + 5 GRT (Average signal-to-noise ratio uncertainty 2 + Signal-to-noise ratio variation 4.0.5 dB Fading profile power uncertainty 3 + Signal-to-noise ratio variation 4.0.5 dB Fading profile power uncertainty 2 + 0.5 dB for single TX Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Fading conditions, single anterna transmission) ± 0.8dB (Subtest 1, Fading conditions, two anterna transmission) ± 0.9dB (Subtest 2, Fading conditions, two anterna transmission) 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.9 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.1 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.2 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.3 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.4 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 8 Expression Test for Description Test for Out-of-sync in DRX 8 Expression Test for Description Test for Out-of-sync in DRX 8 Expression Test for Description Test for Description Test for Description Test for Out-of-sync			Cubtanta 2
comprises three quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty 3. Effect of AWGN flatness and signal flatness Items 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty 2 SQRT (Average signal-to-noise ratio uncertainty 2 Signal-to-noise ratio variation 2.5 dB signal-to-noise ratio variation 2.5 dB Fading profile power uncertainty 2.3 dB Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile power uncertainty ±0.5 dB for single 1x Subtest 4: Same calculations as for subtest 3 but with Fading profile power uncertainty ±0.7 for two Tx. Subtest 1: See 7.3.1 subtest 3 Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 4 ### Subtest 1: ### Subtest 1: ### Subtest 1: ### Subtest 1: ### Subtest 2: ### Subtest 2: ### Subtest 2: ### Subtest 3: ### Subtest 3: ### Subtest 3: ### Subtest 4: ### Subtest 3: ### Subtest 3: ### Subtest 3: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4:			
1. Signal-to-noise ratio uncertainty 2. Padding profile power uncertainty 3. Effect of AWGN flatness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty 2 SQRT (Average signal-to-noise ratio uncertainty 2 SQRT (Average signal-to-noise ratio uncertainty 2 + Signal-to- noise ratio variation 2+ Fading profile power uncertainty?) Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty ±0.5 dB for single Tx Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 4 7.3.2 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync T.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.9 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.1 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.2 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX See 7.3.1, subtest 1 Fading conditions, two antenna transmission) ± 0.6dB (Subtest 2, AWGN conditions) ± 0.6dB (Subtest 2, AWGN conditions) ± 0.6dB (Subtest 2, AWGN conditions) ± 0.6dB (Subtest 2, See 7.3.1, subtest 1 See 7.3.1, subtest 1			
2. Fading profile power uncertainty 3. Effect of AWGN flatness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio variation ± SQRT (Average signal-to-noise ratio variation ± Fading profile power uncertainty ± 0.3 dB Signal-to-noise ratio variation ± 0.5 dB Fading profile power uncertainty ± 0.5 dB Fading profile power uncertainty ± 0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ± 0.7 for two Tx. Subtest 1: See 7.3.1 subtest 3 Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 4 ± 0.9dB (Subtest 2, Fading conditions, two antenna transmission) 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync The Sync Subtest 1: See 7.3.1 subtest 4 Same as 7.3.2 Subtest 1: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 1 Fading conditions, two antenna transmission) ± 0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX Fading conditions, two antenna transmission) ± 0.6dB (Subtest 2, AWGN conditions) Subtest 2: See 7.3.1, subtest 4 Subtest 3: Subtest 4: See 7.3.1, subtest 4 Subtest 4: Same and could be uncertainty ± 0.6dB (AWGN)			
3. Effect of AWGN flatness and signal flatness ltems 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty 2 SQRT (Average signal-to-noise ratio variation 2 + Signal-to-n			
Items 1, 2 and 3 are assumed to be uncorrelated so can be root sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty ± 1.5 gland-to-noise ratio uncertainty ± 1.5 dB signal-to-noise ratio uncertainty ± 0.3 dB signal-to-noise ratio uncertainty ± 0.5 dB Fading profile power uncertainty ± 0.5 dB Fading profile power uncertainty ± 0.5 dB for single TX Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ± 0.7 for two Tx.			
uncorrelated so can be root sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty ± 4 Signal-to- noise ratio variation ± + Fading profile power uncertainty *) Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Subtest 1: Fading conditions, single antenna transmission) **Ever 7.3.1 subtest 3 Subtest 1: Fading conditions, two antenna transmission) **Test for In-sync** **Test for Out-of-sync in DRX** **Test for Out-of-sync in DRX** **Test for In-sync i			o. Encodor /wyork flauress and signal flauress
uncorrelated so can be root sum squared: Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty ± 4 Signal-to- noise ratio variation ± + Fading profile power uncertainty *) Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Subtest 1: Fading conditions, single antenna transmission) **Ever 7.3.1 subtest 3 Subtest 1: Fading conditions, two antenna transmission) **Test for In-sync** **Test for Out-of-sync in DRX** **Test for Out-of-sync in DRX** **Test for In-sync i			Items 1, 2 and 3 are assumed to be
Test System uncertainty = SQRT (Average signal-to-noise ratio uncertainty ² + Signal-to-noise ratio variation² + Fading profile power uncertainty²) Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB Fading profile power uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Subtest 1: Fading conditions, single antenna transmission) 7.3.2 E-UTRAN TDD Radio Link Monitoring Same as 7.3.1 Subtest 2: Fading conditions, two antenna transmission) 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring ±0.6dB (Subtest 1, Fading conditions) Test for In-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring ±0.6dB (AWGN conditions) Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring ±0.6dB (AWGN conditions) Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring ±0.6dB (Subtest 1, Fading conditions, two antenna transmission) **Examc calculations as for subtest 3 but with Fading profile power uncertainty ±0.5 dB for single Tx Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1, subtest 4 **Subtest 2: See 7.3.1, subtest 4 **Subtest 2: See 7.3.1, subtest 1 **Subtest 1: See 7.3.1, subtest 1 **Subtest 2: S			uncorrelated so can be root sum squared:
signal-to-noise ratio variation \$\frac{2}{2}\$ + Fading profile power uncertainty \$\frac{2}{2}\$ \ 0.3 dB \ Signal-to-noise ratio variation \$\frac{2}{2}\$ + Fading profile power uncertainty \$\frac{2}{2}\$ \ 0.3 dB \ Signal-to-noise ratio variation \$\frac{2}{2}\$ \ 0.5 dB \ Fading profile power uncertainty \$\frac{2}{2}\$ \ 0.5 dB \ Fading profile power uncertainty \$\frac{2}{2}\$ \ 0.5 dB for single Tx \ Subtest 1. \ Same calculations as for subtest 3 but with Fading profile uncertainty of \$\frac{2}{2}\$ \ 0.7 for two Tx. \ Subtest 1: \ Fading conditions, single antenna transmission) \ \frac{2}{2}\$ \ 2. \ Fading conditions, two antenna transmission) \ \frac{2}{2}\$ \ 2. \ Fading conditions, two antenna transmission) \ \ 2.0 \ 2. \ 2. \ 2. \ 2. \ 2. \ 2. \			
noise ratio variation ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Signal-to-noise ratio variation ±0.5 dB Fading profile power uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Subtest 1: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 4 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX Fading conditions, two antenna transmission) ± 0.6dB (Subtest 2, AWGN conditions) Test for Out-of-sync in DRX Fading conditions, two antenna transmission) ± 0.6dB (Subtest 1, Fading conditions, two conditions) ± 0.6dB (Subtest 2, AWGN conditions) Test for Out-of-sync in DRX Fading conditions, two antenna transmission) Subtest 1: See 7.3.1, subtest 1 Subtest 1: See 7.3.1, subtest 1 Subtest 2: See 7.3.1, subtest 1			signal-to-noise ratio uncertainty 2 + Signal-to-
uncertainty \$) Signal-to-noise ratio uncertainty \$\pm 0.3 dB\$ Signal-to-noise ratio variation \$\pm 0.5 dB\$ Fading profile power uncertainty \$\pm 0.5 dB\$ Fading profile power uncertainty \$\pm 0.5 dB\$ Fading profile power uncertainty \$\pm 0.5 dB\$ Fading profile power uncertainty \$\pm 0.5 dB\$ Fading profile uncertainty \$\pm 0.5 dB\$ Fading profile uncertainty of \$\pm 0.7 for two Tx\$. Subtest 1: See 7.3.1 subtest 3 Subtest 1: See 7.3.1 subtest 3 Subtest 2: See 7.3.1 subtest 4 \$\pm 0.9dB\$ (Subtest 2, Fading conditions, two antenna transmission) 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.9 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.1 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.2 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.5 E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX Test			noise ratio variation ² + Fading profile power
Signal-to-noise ratio variation ±0.5 dB Fading profile power uncertainty ±0.5 dB for single TX Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring Fading conditions, single antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Fast for Out-of-sync 7.3.4 E-UTRAN FDD Radio Link Monitoring Fast for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Fast for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Fast for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring fast for Out-of-sync in DRX 7.3.9 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWCN conditions) 7.3.1 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (Subtest 2, AWGN conditions) 7.3.2 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (Subtest 1, Fading conditions, two antenna transmission) Subtest 1: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 1			
Fading profile power uncertainty ±0.5 dB for single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring transmission) Fading conditions, single antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring to In-sync in DRX 7.3.9 E-UTRAN FDD Radio Link Monitoring test for In-sync in DRX 7.3.10 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.2 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.3 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.4 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitoring to In-sync in DRX 8 E-UTRAN FDD Radio Link Monitor			
single Tx Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring Test for In-sync Test for In-sync 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.8 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.9 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.9 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.9 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.1 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.2 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.3 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 7.3.4 E-UTRAN TDD Radio Link Monitoring to Odd (AWGN) 8 E- T.3.1, subtest 1 8 Subtest 2: 8 E- T.3.1, subtest 1			Signal-to-noise ratio variation ±0.5 dB
Subtest 4: Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring Fading conditions, single antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.8 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.9 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.1 Subtest 1: Subtest 2: See 7.3.1, subtest 1			
Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring to definitions to antenna transmission) 8 Same calculations as for subtest 1: Subtest 1: 8 Same as 7.3.1 subtest 2 8 Same as 7.3.1 8 Subtest 1: 8 Same as 7.3.1 8 Subtest 2: 8 See 7.3.1, subtest 4 8 Subtest 1: 8 Subtest 2: 8 Subtest 2: 8 Subtest 3: 8 Subtest 4: 8 Subtest 3: 8 Subtest 1: 8 Subtest 4: 8 Subtest 1: 8 Subtest 1: 8 Subtest 1: 8 Subtest 2: 9 See 7.3.1, subtest 4 8 Subtest 2: 9 See 7.3.1, subtest 1 9 Subtest 2: 9 Same as 7.3.1 9 Sa			single Tx
Same calculations as for subtest 3 but with Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring to definitions to antenna transmission) 8 Same calculations as for subtest 1: Subtest 1: 8 Same as 7.3.1 subtest 2 8 Same as 7.3.1 8 Subtest 1: 8 Same as 7.3.1 8 Subtest 2: 8 See 7.3.1, subtest 4 8 Subtest 1: 8 Subtest 2: 8 Subtest 2: 8 Subtest 3: 8 Subtest 4: 8 Subtest 3: 8 Subtest 1: 8 Subtest 4: 8 Subtest 1: 8 Subtest 1: 8 Subtest 1: 8 Subtest 2: 9 See 7.3.1, subtest 4 8 Subtest 2: 9 See 7.3.1, subtest 1 9 Subtest 2: 9 Same as 7.3.1 9 Sa			
Fading profile uncertainty of ±0.7 for two Tx. 7.3.2 E-UTRAN FDD Radio Link Monitoring Fading conditions, single antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring to antenna transmission 7.3.8 E-UTRAN FDD Radio Link Monitoring to antenna transmission 7.3.9 E-UTRAN FDD Radio Link Monitoring to antenna transmission 2.0.6dB (Subtest 1, Fading conditions, two antenna transmission) 4.0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.7 E-UTRAN TDD Radio Link Monitoring to 6.6dB (Subtest 1, Fading conditions, two antenna transmission) 4.0.6dB (Subtest 1, Fading conditions, two antenna transmission) 5.0.6dB (Subtest 1, Fading conditions, two antenna transmission) 5.0.6dB (Subtest 2, AWGN conditions) 5.0.6dB (Subtest 2, AWGN conditions) 5.0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to 6.6dB (AWGN conditions) 8.0.8 E-UTRAN TDD Radio Link Monitoring to 6.8 E-UTRAN			
7.3.2 E-UTRAN FDD Radio Link Monitoring Test for In-sync Fading conditions, single antenna transmission) Subtest 2: See 7.3.1 subtest 4			
Test for In-sync Fading conditions, single antenna transmission) Fading conditions, single antenna transmission) Fading conditions, subtest 2: See 7.3.1 subtest 4 ± 0.9dB (Subtest 2, Fading conditions, two antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX Fading conditions, two antenna transmission) ± 0.9dB (Subtest 1, Fading conditions, two antenna transmission) Subtest 1: See 7.3.1, subtest 1 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 1 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subte	700511704115000 1: 1: 1 4 4 4 4	0.0.10.70.14.44	
single antenna transmission) \$\frac{\pmath{\text{single antenna}}{\pmath{\text{transmission}}}}{\pmath{\text{ser 7.3.1 subtest 4}}}\$ \$\frac{\pmath{\pmath{\text{ser 7.3.1 subtest 4}}}{\pmath{\text{ser 7.3.1 subtest 4}}}\$ \$\frac{\pmath{\text{ser 7.3.1 subtest 4}}}{\pmath{\text{ser 7.3.1 subtest 4}}}\$ \$\frac{\pmath{\text{ser 7.3.1 subtest 4}}}{\pmath{\text{ser 7.3.1 subtest 4}}}\$ \$\frac{\pmath{\text{same as 7.3.1}}}{\pmath{\text{same as 7.3.2}}}\$ \$\frac{\pmath{\text{same as 7.3.2}}}{\pmath{\text{same as 7.3.2}}}\$ \$\frac{\pmath{\text{same as 7.3.2}}}{\pmath{\text{same as 7.3.2}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{same as 7.3.1, subtest 1:}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}\$ \$\pmath{\text{subtest 1:}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}\$ \$\pmath{\text{subtest 1:}}}\$ \$\frac{\pmath{\text{sold}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\pmath{\text{sold}}}}\$ \$\frac{\pmath{\text{subtest 1:}}}{\tex			
transmission) transmission Subtest 2: See 7.3.1 subtest 4	restion in-sync		See 7.3.1 sublest 3
# 0.9dB (Subtest 2, Fading conditions, two antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX # 0.9dB (Subtest 1, Fading conditions, two antenna transmission) # 0.9dB (Subtest 1, Fading conditions, two antenna transmission) # 0.6dB (Subtest 2, AWGN conditions) # 0.6dB (AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring # 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring # 0.6dB (AWGN See 7.3.1, subtest 1) # 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring # 0.6dB (AWGN See 7.3.1, subtest 1) # 0.6dB (Subtest 2, AWGN conditions) 8 See 7.3.1 subtest 4 # 0.6dB (Subtest 2, AWGN conditions) 8 See 7.3.1 subtest 4 # 0.6dB (Subtest 2, AWGN conditions) 9 Subtest 2: # 0.6dB (Subtest 2, AWGN conditions) 8 See 7.3.1, subtest 1 # 0.6dB (Subtest 2, AWGN conditions) 9 See 7.3.1, subtest 1			Subtest 2:
# 0.9dB (Subtest 2, Fading conditions, two antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX		liansinission)	
Fading conditions, two antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 E-UTRAN TDD Radio		± 0.9dB (Subtest 2	
antenna transmission) 7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX 8 Same as 7.3.1 8 Same as 7.3.2 8 Subtest 1: 8 See 7.3.1, subtest 1 8 Subtest 1: 8 Subtest 2: 9 See 7.3.1, subtest 4 8 Subtest 2: 9 See 7.3.1, subtest 4 8 Subtest 2: 9 See 7.3.1, subtest 1 8 Subtest 2: 9 See 7.3.1, subtest 1 8 Subtest 2: 9 See 7.3.1, subtest 1 9 Subtest 2: 9 See 7.3.1, subtest 1			
7.3.3 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX Test for Out-of-sync in DRX 7.3.6 E-UTRAN FDD Radio Link Monitoring to .6dB (Subtest 2, AWGN conditions) 7.3.7 E-UTRAN TDD Radio Link Monitoring to .6dB (Subtest 1, Fading conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring to .6dB (AWGN conditions)			
Test for Out-of-sync 7.3.4 E-UTRAN TDD Radio Link Monitoring Same as 7.3.2 Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX Test for Out-of-sync in DRX Test for In-sync in DRX Test for Out-of-sync in DRX Test for In-sync in DRX Test for In-sync in DRX Test for In-sync in DRX Test for Out-of-sync in DRX Test for Out-	7.3.3 E-UTRAN TDD Radio Link Monitoring		Same as 7.3.1
Test for In-sync 7.3.5 E-UTRAN FDD Radio Link Monitoring test for Out-of-sync in DRX Fading conditions, two antenna transmission) 7.3.6 E-UTRAN FDD Radio Link Monitoring test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX Test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX 7.3.8 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX Subtest 1: See 7.3.1, subtest 1: See 7.3.1, subtest 1: Subtest 2: See 7.3.1, subtest 3: Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 3: Subtest 1: See 7.3.1, subtest 1: See 7.3.1, subtest 3: Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 3: Subtest 2: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 3: Subtest 2: See 7.3.1, subtest 3: Subtest 3: Subtest 3: Subtest 4: Subtest 3: Subtest 4: Subtest 3: See 7.3.1, subtest 4 Subtest 3: See 7.3.1, subtest 4 Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 4 Subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 4 Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: See 7.3.1, subtest 3: Sub	Test for Out-of-sync		
7.3.5 E-UTRAN FDD Radio Link Monitoring ±0.9dB (Subtest 1, Fading conditions, two antenna transmission) 7.3.6 E-UTRAN FDD Radio Link Monitoring ±0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring ±0.6dB (AWGN conditions) 7.3.7 E-UTRAN TDD Radio Link Monitoring ±0.9dB (Subtest 1, Fading conditions, two antenna transmission) 7.3.8 E-UTRAN TDD Radio Link Monitoring ±0.6dB (AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ±0.6dB (AWGN Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ±0.6dB (AWGN See 7.3.1, subtest 1)		Same as 7.3.2	Same as 7.3.2
Test for Out-of-sync in DRX Fading conditions, two antenna transmission) Fading conditions, two antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX Test for Out-of-sync in DRX Test for Out-of-sync in DRX Fading conditions, two conditions) ### Subtest 1 ### Subtest 1: ### Subtest 2: ### Subtest 3: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4: ### Subtest 4: ### Subtest 3: ### Subtest 4:			
antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX Test for Out			
Subtest 2: \$\pmu 0.6dB (Subtest 2, AWGN conditions)\$ 7.3.6 E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX Test for Out-of-sync in DRX Test for Out-of-sync in DRX Fading conditions, two antenna transmission) \$\pmu 0.6dB (Subtest 1, Subtest 1) See 7.3.1, subtest 4 \$\pmu 0.6dB (Subtest 2, AWGN conditions)\$ \$\pmu 0.6dB (Subtest 2, AWGN conditions)\$ 7.3.8 E-UTRAN TDD Radio Link Monitoring \$\pmu 0.6dB (AWGN)\$ \$\pmu 0.6dB (AWGN) See 7.3.1, subtest 1\$	Test for Out-of-sync in DRX		See 7.3.1, subtest 4
± 0.6dB (Subtest 2, AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX Test for Out-of-sync in DRX Test for Out-of-sync in DRX E-UTRAN TDD Radio Link Monitoring test for Out-of-sy		antenna transmission)	
AWGN conditions) 7.3.6 E-UTRAN FDD Radio Link Monitoring ± 0.6dB (AWGN conditions) Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring ± 0.9dB (Subtest 1, Fading conditions, two antenna transmission) Fading conditions, two antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1		0.04D (0.14 + 12	
7.3.6 E-UTRAN FDD Radio Link Monitoring tonditions) Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring tonditions) Test for Out-of-sync in DRX Test for Out-of-sync in DRX Each of the sync in DRX Fading conditions, two antenna transmission) Subtest 1: See 7.3.1, subtest 1: See 7.3.1, subtest 1: See 7.3.1, subtest 1: Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 1 Subtest 2: See 7.3.1, subtest 1			See 7.3.1, subtest 1
Test for In-sync in DRX 7.3.7 E-UTRAN TDD Radio Link Monitoring ±0.9dB (Subtest 1, Fading conditions, two antenna transmission) Subtest 1: Fading conditions, two antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1	7.2.6 E LITEAN EDD Padia Link Manitarina		Soo 7.2.1 subtost 1
7.3.7 E-UTRAN TDD Radio Link Monitoring ±0.9dB (Subtest 1, Fading conditions, two antenna transmission) ±0.9dB (Subtest 1, Fading conditions, two antenna transmission) Subtest 2: See 7.3.1, subtest 2 ± 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1			SEE 1.3.1, SUDIEST I
Test for Out-of-sync in DRX Fading conditions, two antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) Fading conditions, two antenna transmission) Subtest 2: See 7.3.1, subtest 4 Subtest 2: See 7.3.1, subtest 1			Subtest 1:
antenna transmission) Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1			
Subtest 2: ± 0.6dB (Subtest 2, AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN Subtest 2: See 7.3.1, subtest 1	Tookioi Out of Sylic III DIXA		000 7.0.1, Subtoot T
± 0.6dB (Subtest 2, AWGN conditions) See 7.3.1, subtest 1 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1		a	Subtest 2:
AWGN conditions) 7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1		± 0.6dB (Subtest 2.	
7.3.8 E-UTRAN TDD Radio Link Monitoring ± 0.6dB (AWGN See 7.3.1, subtest 1			
	7.3.8 E-UTRAN TDD Radio Link Monitoring		See 7.3.1, subtest 1
			·

8.1.1 E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation conditions in asynchronous cells	N _∞ ±1.0 dB averaged over BW _{Config} Ês ₁ / N _∞ ±0.6 dB averaged over BW _{Config} Ês ₂ / N _∞ ±0.6 dB averaged over BW _{Config}	Note: $\hat{\mathbb{E}}_{s_1}/N_{\infty}$ is the ratio of cell 1 signal / AWGN $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ is the ratio of cell 2 signal / AWGN $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ is the ratio of cell 2 signal / AWGN $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty ltems 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ uncertainty = SQRT (Signal-to-noise
		ratio uncertainty ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Fading profile power uncertainty ±0.5 dB
8.1.2 E-UTRAN FDD-FDD intra frequency event triggered reporting under fading propagation conditions in synchronous cells	Same as 8.1.1	Same as 8.1.1
8.1.3 E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX	Same as 8.1.1	Same as 8.1.1
8.1.5 E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps	$N_{\rm oc}$ ±1.0 dB averaged over BW _{Config} $\hat{E}_{s_1}/N_{\rm oc}$ ±0.3 dB averaged over BW _{Config} $\hat{E}_{s_2}/N_{\rm oc}$ ±0.3 dB averaged over BW _{Config} averaged over BW _{Config}	Note: $\hat{E}s_1/N_{\infty}$ is the ratio of cell 1 signal / AWGN $\hat{E}s_2/N_{\infty}$ is the ratio of cell 2 signal / AWGN
8.1.6 E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	Same as 8.1.5	Same as 8.1.5
8.2.1 E-UTRAN TDD-TDD intra frequency event triggered reporting under fading propagation conditions in synchronous cells	Same as 8.1.1	Same as 8.1.1
8.2.2 E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells with DRX	Same as 8.1.1	Same as 8.1.1
8.2.3 E-UTRAN TDD-TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps	$N_{\rm oc}$ ±1.0 dB averaged over BW _{Config} $\hat{E}_{s_1}/N_{\rm oc}$ ±0.3 dB averaged over BW _{Config} $\hat{E}_{s_2}/N_{\rm oc}$ ±0.3 dB averaged over BW _{Config} averaged over BW _{Config}	Note: $\hat{E}s_1/N_{\infty}$ is the ratio of cell 1 signal / AWGN $\hat{E}s_2/N_{\infty}$ is the ratio of cell 2 signal / AWGN
8.2.4 E-UTRAN TDD-TDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	Same as 8.2.3	Same as 8.2.3

8.3.1 E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells	N _{oc1} ±0.7 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.6 dB averaged over BW _{Config} N _{oc2} ±0.7 dB averaged over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB averaged over BW _{Config}	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{\mathbb{E}}_{s_1}/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ is the ratio of cell 2 signal / AWGN Each $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ is the ratio of cell 2 signal / AWGN Each $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ is the ratio of cell 2 signal / AWGN Each $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty ltems 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ uncertainty = SQRT (Signal-to-noise ratio uncertainty $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ uncertainty + Fading profile power uncertainty $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ Signal-to-noise ratio uncertainty $\hat{\mathbb{E}}_{s_2}/N_{oc2}$ dB Fading profile power uncertainty $\hat{\mathbb{E}}_{s_2}/N_{oc2}$
8.3.2 E-UTRAN FDD-FDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in asynchronous cells	Same as 8.3.1	Same as 8.3.1
8.3.3 E-UTRAN FDD-FDD Inter frequency event triggered reporting under AWGN propagation conditions in asynchronous cells with DRX when L3 filtering is used	N_{oc1} ±0.7 dB averaged over BW _{Config} $\hat{E}_{s_1}/N_{\text{oc1}}$ ±0.3 dB averaged over BW _{Config} N_{oc2} ±0.7 dB averaged over BW _{Config} $\hat{E}_{s_2}/N_{\text{oc2}}$ ±0.3 dB averaged over BW _{Config}	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
8.3.4 E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps	N_{oc1} ±1.0 dB averaged over BW _{Config} $\hat{\mathbb{E}}_{s_1}/N_{\text{oc1}}$ ±0.3 dB averaged over BW _{Config} N_{oc2} ±1.0 dB averaged over BW _{Config} $\hat{\mathbb{E}}_{s_2}/N_{\text{oc2}}$ ±0.3 dB averaged over BW _{Config}	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
8.3.5 E-UTRAN FDD - FDD Inter-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	Same as 8.3.4	Same as 8.3.4
8.4.1 E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells	Noc1 ±0.7 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.6 dB averaged over BW _{Config} Noc2 ±0.7 dB averaged over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB averaged over BW _{Config}	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN Each $\hat{E}s/N_{oc2}$ is the ratio of cell 2 signal / AWGN Each $\hat{E}s/N_{oc2}$ uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty ltems 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{E}s/N_{oc}$ uncertainty = SQRT (Signal-to-noise ratio uncertainty 2 + Fading profile power uncertainty 2) Signal-to-noise ratio uncertainty ± 0.3 dB Fading profile power uncertainty ± 0.5 dB
8.4.2 E-UTRAN TDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells	Same as 8.4.1	Same as 8.4.1

8.4.3 E-UTRAN TDD-TDD inter-frequency	Same as 8.3.3	Same as 8.3.3
event triggered reporting under AWGN propagation conditions in synchronous		
cells with DRX when L3 filtering is used		
8.4.4 E-UTRAN TDD-TDD Inter-frequency	N _{oc1} ±1.0 dB averaged	Note:
identification of a new CGI of E-UTR A cell using autonomous gaps	over BW _{Config} Ês ₁ / N _{oc1} ±0.3 dB	$N_{\infty 1}$ is the AWGN on cell 1 frequency $\hat{E}_{s_1}/N_{\infty 1}$ is the ratio of cell 1 signal / AWGN
using autonomous gaps	averaged over BW _{Config}	N _{oc2} is the AWGN on cell 2 frequency
	N _{oc2} ±1.0 dB averaged	Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	over BW _{Config}	
	Ês ₂ /N _{oc2} ±0.3 dB averaged over BW _{Config}	
8.4.5 E-UTRAN TDD-TDD Inter-frequency	Same as 8.4.4	Same as 8.4.4
identification of a new CGI of E-UTRA cell		
using autonomous gaps with DRX	E LIED AND III	N
8.5.1 E-UTRAN FDD - UTRAN FDD event triggered reporting under fading	E-UTRAN cell N _∞ ±0.7 dB averaged	Note: N _∞ is the AWGN on Cell 1 frequency
propagation conditions	over BW _{Config}	$\hat{E}s / N_{\infty}$ is the ratio of Cell 1 signal / AWGN
1 1 3	Ês / N₀c ±0.6 dB	3 to 5
	averaged over BW _{Config}	
		Ês / N₀c uncertainty or I₀r/I₀c uncertainty for
		fading condition comprises two quantities:
		1. Signal-to-noise ratio uncertainty
		2. Fading profile power uncertainty
		Items 1 and 2 are assumed to be uncorrelated
		so can be rootsum squared:
		Ês / N₀c uncertainty = SQRT (Signal-to-noise
		ratio uncertainty ² + Fading profile power uncertainty ²)
		Signal-to-noise ratio uncertainty ±0.3 dB
		Fading profile power uncertainty ±0.5 dB
	UTRA cell	
	l _∞ ±0.7 dB	loc is the AWGN on Cell 2 (UTRA) frequency
	I _{or} /I _{oc} ±0.6 dB CPICH Ec/Ior ±0.1 dB	lor/loc is the ratio of Cell 2 signal/AWGN CPICH Ec/lor is the fraction of Cell 2 power
	01 1011 20/101 20:1 42	assigned to the CPICH physical channel
8.5.2 E-UTRAN FDD - UTRAN FDD SON	E-UTRA cell	Note:
ANR cell search reporting under AWGN	N _∞ ±0.7 dB averaged over BW _{Config}	N _∞ is the AWGN on cell 1 frequency Ês / N _∞ is the ratio of cell 1 signal / AWGN
propagation conditions	Ês / N _{oc} ±0.3 dB	ES / N _∞ is the ratio of cell 1 signal / AVVGN
	averaged over BW _{Config}	
		loc is the AWGN on Cell 2 (UTRA) frequency
	UTRA cell I _∞ ±0.7 dB	lor/loc is the ratio of Cell 2 signal/AWGN CPICH Ec/lor is the fraction of Cell 2 power
	I _{or} /I _{oc} ±0.7 dB	assigned to the CPICH physical channel
	CPICH Ec/lor ±0.1 dB	SCH Ec/lor is the fraction of Cell 2 power
	SCH Ec/lor ±0.1 dB	assigned to the SCH physical channel
8.5.3 E-UTRAN FDD - UTRAN FDD event triggered reporting when DRX is used	Same as 8.5.1	Same as 8.5.1
under fading propagation conditions		
8.5.4 E-UTRAN FDD - UTRAN FDD	E-UTRA cell	Note:
enhanced cell identification under AWGN	N _∞ ±1.0 dB averaged	N _{oc} is the AWGN on cell 1 frequency
propagation conditions	over BW _{Config} Ê _s / N _{oc} ±0.3 dB	Ê _s / N _{oc} is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	
		I _∞ is the AWGN on Cell 2 (UTRA) frequency
	UTRA cell	I _{or} /I _{oc} is the ratio of Cell 2 signal/AWGN
	$I_{oc} \pm 0.7 \text{ dB}$ $I_{or}/I_{oc} \pm 0.3 \text{ dB}$	CPICH E _o /l _{or} is the fraction of Cell 2 power assigned to the CPICH physical channel
	CPICH E _c /I _{or} ±0.1 dB	SCH E _c /I _{or} is the fraction of Cell 2 power
	SCH E _c /I _{or} ±0.1 dB	assigned to the SCH physical channel
8.6.1 E-UTRAN TDD - UTRAN FDD event	Same as 8.5.1	Same as 8.5.1
triggered reporting under fading propagation conditions		
propagation conditions		

8.7.1 E-UTRAN TDD - UTRAN TDD event	E-UTRA cell	Notes:
triggered reporting under fading	N _∞ ±0.7 dB averaged	
propagation conditions	over BW _{Config} Ês / N _∞ ±0.6 dB averaged over BW _{Config}	N_{∞} is the AWGN on cell 1 (E-UTRA) frequency $\hat{E}s$ / N_{∞} is the ratio of cell 1 signal / AWGN
	averaged ever byvening	Ês / N _{oc} uncertainty or I _{or} / I _{oc} uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty
		Items 1 and 2 are assumed to be uncorrelated so can be root sum squared:
	UTRA cell I _{oc} ±0.7 dB I _{or} /I _{oc} ±0.6 dB PCCPCH Ec/lor ±0.1 dB DwPCH Ec/lor ±0.1 dB	I_{oc} is the AWGN on cell 2 (UTRA) frequency I_{or} / I_{oc} is the ratio of cell 2 signal / AWGN PCCPCH E_c / I_{or} is the fraction of cell 2 power assigned to the PCCPCH Physical channel DwPCH_Ec/lor is the fraction of cell 2 power
		assigned to the DwPCH channel
8.7.2 E-UTRAN TDD - UTRAN TDD cell search when DRX is used under fading propagation conditions	Same as 8.7.1	Same as 8.7.1
8.7.3 E-UTRAN TDD - UTRAN TDD SON ANR cell search reporting under AWGN propagation conditions	E-UTRA cell N_{∞} ±0.7 dB averaged over BW_{Config} $\hat{E}s$ / N_{∞} ±0.3 dB averaged over BW_{Config}	Note: N_{∞} is the AWGN on cell 1 frequency $\hat{E}s$ / N_{∞} is the ratio of cell 1 signal / AWGN
	UTRA cell I _{cc} ±0.7 dB I _{or} /I _{cc} ±0.3 dB PCCPCH Ec/lor ±0.1 dB DwPCH_Ec/lor ±0.1 dB	l _{oc} is the AWGN on cell 2 (UTRA) frequency l _{or} / l _{oc} is the ratio of cell 2 signal / AWGN PCCPCH E _c / l _{or} is the fraction of cell 2 power assigned to the PCCPCH Physical channel DwPCH_Ec/lor is the fraction of cell 2 power assigned to the DwPCH channel
8.7.4 E-UTRAN TDD - UTRAN TDD enhanced cell identification under AWGN propagation conditions	E-UTRA cell Noc ±1.0 dB averaged over BW _{Config} Ês / Noc ±0.3 dB averaged over BW _{Config}	Note: Noc is the AWGN on cell 1 frequency Ês / Noc is the ratio of cell 1 signal / AWGN
		loc is the AWGN on cell 2 (UTRA) frequency lor / loc is the ratio of cell 2 signal / AWGN PCCPCH Ec/lor is the fraction of cell 2 power assigned to the PCCPCH Physical channel DwPCH_Ec/lor is the fraction of cell 2 power assigned to the DwPCH channel
8.8.1 E-UTRAN FDD - GSM event triggered reporting in AWGN	E-UTRA Cell N _∞ ±0.7 dB averaged over BW _{Config} Ês / N _∞ ±0.3 dB averaged over BW _{Config}	Note: N_{∞} is the AWGN on cell 1 frequency $\hat{E}s / N_{\infty}$ is the ratio of cell 1 signal / AWGN
	GSM cell Signal level ±0.7 dB	Cell 2 (GSM) has only the wanted signal, without AWGN

8.8.2 E-UTRAN FDD- GSM event triggered	E-UTRA Cell	Note:
reporting when DRX is used in AWGN	N _{oc} ±0.7 dB averaged over BW _{Config} Ês / N _{oc} ±0.3 dB averaged over BW _{Config}	N_{∞} is the AWGN on cell 1 frequency Ês / N_{∞} is the ratio of cell 1 signal / AWGN
	GSM cell Signal level ±0.7 dB	Cell 2 (GSM) has only the wanted signal, without AWGN
8.9.1 E-UTRAN FDD - UTRAN TDD event triggered reporting under fading propagation conditions	E-UTRA cell Noc ±0.7 dB averaged over BW _{Config} Ês / Noc ±0.6 dB averaged over BW _{Config}	N _∞ is the AWGN on cell 1 frequency Ês / N _∞ is the ratio of cell 1 signal / AWGN
	UTRATDD cell $I_{\infty}\pm0.7$ dB $I_{\text{lor}}\pm0.6$ dB $PCCPCH_Ec$ /lor ±0.1 dB $I_{\text{lor}}\pm0.1$ dB $I_{\text{lor}}\pm0.1$ dB	loc is the AWGN on Cell 2 (UTRA TDD) frequency lor/loc is the ratio of Cell 2 signal/AWGN PCCPCH_Ec /lor is the fraction on Cell 2 power assigned to the CPCCPCH physical channel DwPCH_Ec /lor is the fraction on Cell 2 power assigned to the DwPCH physical channel
		Ês / N _{oc} and lor/loc uncertainty for fading condition comprise two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty
8.9.2 E-UTRAN FDD - UTRAN TDD enhanced cell identification under AWGN propagation conditions	Same as 8.7.4	Same as 8.7.4
8.10.1 E-UTRAN TDD - GSM event triggered reporting in AWGN	Same as 8.8.1	Same as 8.8.1
8.10.2 E-UTRAN TDD- GSM event triggered reporting when DRX is used in AWGN	Same as 8.8.2	Same as 8.8.2
8.11.1 Multiple E-UTRAN FDD-FDD Inter- frequency event triggered reporting under fading propagation conditions	N _{oc1} ±0.7 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.3 dB averaged over BW _{Config}	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN
	N _{oc2} ±0.7 dB averaged over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB averaged over BW _{Config}	N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
	N _{0C3} ±0.7 dB averaged over BW _{Config} Ês ₃ / N _{0C3} ±0.6 dB averaged over BW _{Config}	N _{∞3} is the AWGN on cell 3 frequency Ês3 / N _{∞3} is the ratio of cell 3 signal / AWGN
	The state of the s	$\hat{E}s_2/N_{oc2}$ uncertainty or $\hat{E}s_3/N_{oc3}$ uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty
		Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{E}s / N_{oc}$ uncertainty = SQRT (Signal-to-noise ratio uncertainty 2 + Fading profile power uncertainty 2) Signal-to-noise ratio uncertainty ± 0.3 dB Fading profile power uncertainty ± 0.5 dB
8.11.2 E-UTRAN TDD - E-UTRAN TDD and E-UTRAN TDD Inter-frequency event triggered reporting under fading propagation conditions	Same as 8.11.1	Same as 8.11.1

8.11.3 E-UTRAN FDD-FDD Inter-frequency and UTRAN FDD event triggered reporting under fading propagation conditions	E-UTRA cells N _{oc1} ±0.7 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.3 dB averaged over BW _{Config}	Note: N _{oc1} is the AWGN on cell 1 frequency Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	N _{oc2} ±0.7 dB averaged over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB averaged over BW _{Config}	N _{oc2} is the AWGN on cell 2 frequency Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	UTRA cell I _{oc} ±0.7 dB I _{or} /I _{oc} ±0.6 dB CPICH Ec/Ior ±0.1 dB	loc is the AWGN on Cell 3 (UTRA) frequency lor/loc is the ratio of Cell 3 signal/AWGN CPICH Ec/lor is the fraction of Cell 3 power assigned to the CPICH physical channel
		Ês ₂ / N _{oc2} uncertainty or I _{or} /I _{oc} uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty
		Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{E}s / N_{\infty}$ uncertainty = SQRT (Signal-to-noise ratio uncertainty 2 + Fading profile power uncertainty 2) Signal-to-noise ratio uncertainty ± 0.3 dB Fading profile power uncertainty ± 0.5 dB
8.11.4 InterRAT E-UTRATDD to E-UTRATDD and UTRATDD cell search	E-UTRA cells N _{oc1} ±0.7 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.3 dB averaged over BW _{Config}	Note: N _{oc1} is the AWGN on cell 1 frequency Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	N _{oc2} ±0.7 dB averaged over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB averaged over BW _{Config}	N _{oc2} is the AWGN on cell 2 frequency Es ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	UTRA cell $I_{\infty}\pm0.7$ dB $I_{\rm or}/I_{\infty}\pm0.6$ dB PCCPCH Ec/lor ±0.1 dB DwPCH_Ec/lor ±0.1 dB	I_{oc} is the AWGN on cell 3 (UTRA) frequency I_{or} / I_{oc} is the ratio of cell 3 signal / AWGN PCCPCH E_c / I_{or} is the fraction of cell 3 power assigned to the PCCPCH Physical channel DwPCH_Ec/lor is the fraction of cell 3 power assigned to the DwPCH channel
		Ês ₂ / N _{oc2} uncertainty or I _{or} /I _{oc} uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty
		Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{E}s / N_{\infty}$ or I_{or}/I_{∞} uncertainty = SQRT (Signal-to-noise ratio uncertainty ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Fading profile power uncertainty ±0.5 dB

8.11.5 Combined E-UTRAN FDD - E-UTRA	E-UTRA cells	Note:
	N _{oc1} ±1.0 dB averaged	N _{oc1} is the AWGN on cell 1 frequency
fading; GSM cell in static propagation	over BW _{Config}	$\hat{E}s_1/N_{oct}$ is the ratio of cell 1 signal / AWGN
conditions	Ês ₁ / N _{oc1} ±0.6 dB	L31/ Noc1 13 the ratio of cell 1 signal/ AVVOIV
Conditions	averaged over BW _{Config}	
	averaged over byvConfig	
	N _{oc2} ±1.0 dB averaged	N _{oc2} is the AWGN on cell 2 frequency
	over BW _{Config}	Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	Ês ₂ / N _{oc2} ±0.6 dB	
	averaged over BW _{Config}	
	GSM cell	Cell 3 (GSM) has only the wanted signal,
	Signal level ±0.7 dB	without AWGN
		Ês ₁ / N _{oc1} uncertainty or Ês ₂ / N _{oc2} uncertainty
		for fading condition comprises two quantities:
		Signal-to-noise ratio uncertainty
		2. Fading profile power uncertainty
		Itama 1 and 2 are consumed to be assessed to the
		Items 1 and 2 are assumed to be uncorrelated
		so can be rootsum squared:
		Ês / N₀c uncertainty = SQRT (Signal-to-noise
		ratio uncertainty ² + Fading profile power
		uncertainty ²)
		Signal-to-noise ratio uncertainty ±0.3 dB
		Fading profile power uncertainty ±0.5 dB
8.11.6 Combined E-UTRAN TDD - E-UTRA	Same as 8.11.5	Same as 8.11.5
TDD and GSM cell search. E-UTRA cells in		
fading; GSM cell in static propagation		
conditions		
8.14.1 E-UTRAN TDD-FDD Inter-frequency	Same as 8.3.1	Same as 8.3.1
event triggered reporting under fading	<u>Dame as 0.5.1</u>	Same as 6.5.1
propagation conditions in asynchronous		
cells	0.04	0.04
8.14.2 E-UTRAN TDD-FDD Inter-frequency	Same as 8.3.1	Same as 8.3.1
event triggered reporting when DRX is		
used under fading propagation conditions		
in asynchronous cells		
8.14.3 E-UTRAN TDD - FDD Inter-	Same as 8.4.4	Same as 8.4.4
frequency identification of a new CGI of E-		
UTRA cell using autonomous gaps		
8.15.1 E-UTRAN FDD-TDD Inter-frequency	Same as 8.4.1	Same as 8.4.1
event triggered reporting under fading		
propagation conditions in asynchronous		
cells		
8.15.2 E-UTRAN FDD-TDD Inter-frequency	Same as 8.4.1	Same as 8.4.1
event triggered reporting when DRX is		
used under fading propagation conditions		
in asynchronous cells		
8.15.3 E-UTRAN FDD - TDD Inter-	Samo ac 9 4 4	Samo as 9.4.4
	Same as 8.4.4	Same as 8.4.4
frequency identification of a new CGI of E-		
UTRA cell using autonomous gaps		

8.16.1 E-UTRAN FDD event triggered	00,	Note:
reporting under deactivated SCell in non- DRX	over BW _{Config} Ês ₁ / N _{oc1} ±0.6 dB averaged over BW _{Config}	N _{oc1} is the AWGN on frequency 1 Es ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	N _{oc2} ±1.0 dB averaged	N _{∞2} is the AWGN on frequency 2
	over BW _{Config} Ês ₂ / N _{oc2} ±0.6 dB	Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	averaged over BW _{Config} Ês ₃ / N _{oc2} ±0.6 dB averaged over BW _{Config}	Ês ₃ / N _{oc2} is the ratio of cell 3 signal / AWGN
	Time alignment error cell 2 rel. to cell 1: Intra-band contiguous CA: ±130 ns (±4Ts) Intra-band non-contiguous CA: ±260 ns (±8Ts) Inter-band CA: ±260 ns (±8Ts)	$\hat{\mathbb{E}}s_1/N_{oc1}$, $\hat{\mathbb{E}}s_2/N_{oc2}$ uncertainty and $\hat{\mathbb{E}}s_3/N_{oc2}$ uncertainty for fading condition comprises two quantities: 1. Signal-to-noise ratio uncertainty 2. Fading profile power uncertainty Items 1 and 2 are assumed to be uncorrelated so can be root sum squared: $\hat{\mathbb{E}}s/N_{oc}$ uncertainty = SQRT (Signal-to-noise ratio uncertainty ² + Fading profile power uncertainty ²) Signal-to-noise ratio uncertainty ±0.3 dB Fading profile power uncertainty ±0.5 dB
		$T_S = 1/(15000 \times 2048)$ seconds, the basic timing unit defined in TS 36.211 [9]
8.16.2 E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX	Same as 8.16.1	Same as 8.16.1
8.16.3 E-UTRAN FDD-FDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX	N _{oc1} ±1.0 dB averaged over BW _{Config} Ês ₁ / N _{oc1} ±0.3 dB averaged over BW _{Config}	Note: $N_{\infty 1}$ is the AWGN on frequency 1 $\hat{E}s_1/N_{\infty 1}$ is the ratio of Cell 1 signal / AWGN
	N _{oc2} ±1.0 dB averaged over BW _{Config}	N _{∞2} is the AWGN on frequency 2
	Ês ₂ / N _{oc2} ±0.3 dB averaged over BW _{Config}	$\hat{E}s_2/N_{oc2}$ is the ratio of Cell 2 signal / AWGN
	Ês ₃ / N _{oc2} ±0.3 dB averaged over BW _{Config}	Ês ₃ / N _{oc2} is the ratio of Cell 3 signal / AWGN
	Time alignment error cell 2 rel. to cell 1: Intra-band contiguous CA: ±130 ns (±4Ts) Intra-band non-contiguous CA: ±260 ns (±8Ts) Inter-band CA: ±260 ns (±8Ts)	T_S = 1/(15000 x 2048) seconds, the basic timing unit defined in TS 36.211 [9]
8.16.4 E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX	Same as 8.16.3	Same as 8.16.3
9.1.1.1 FDD Intra Frequency Absolute	N _∞ ±1.0 dB averaged	Note:
RSRP Accuracy	over BW _{Confiq} $N_{oc} \pm 1.3$ dB for PRBs #22-27 $\hat{\mathbb{E}}_{s_1}/N_{oc}$ and $\hat{\mathbb{E}}_{s_2}/N_{oc}$	$\hat{E}s_1/N_{\infty}$ is the ratio of cell 1 signal / AWGN $\hat{E}s_2/N_{\infty}$ is the ratio of cell 2 signal / AWGN
	each ±0.3 dB averaged over BW _{Config}	
	$\hat{E}s_1/N_{\infty}$ and $\hat{E}s_2/N_{\infty}$ each ±0.8 dB for PRBs #22-27	

9.1.1.2 FDD Intra Frequency Relative Accuracy of RSRP	N_{∞} ±0.7 dB averaged over BW _{Config} N_{∞} ±1.0 dB for PRBs #22-27 $\hat{\mathbb{E}}_{s_1}/N_{\infty}$ and $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ each ±0.3 dB averaged over BW _{Config} $\hat{\mathbb{E}}_{s_1}/N_{\infty}$ and $\hat{\mathbb{E}}_{s_2}/N_{\infty}$ each ±0.8 dB for PRBs	Note: $ \hat{E}_{s_1}/N_{oc} \text{ is the ratio of cell 1 signal / AWGN} $
9.1.2.1 TDD Intra Frequency Absolute	#22-27 Same as 9.1.1.1	Same as 9.1.1.1
RSRP Accuracy 9.1.2.2 TDD Intra Frequency Relative	Same as 9.1.1.2	Same as 9.1.1.2
RSRP Accuracy 9.1.3.1 FDD Inter Frequency Absolute RSRP Accuracy	N _{oc1} and N _{oc2} each ±1.0 dB averaged over BW _{Config} N _{oc1} and N _{oc2} each ±1.3 dB for PRBs #22- 27 Ês ₁ / N _{oc1} and Ês ₂ / N _{oc2} each ±0.3 dB averaged over BW _{Config} Ês ₁ / N _{oc1} and Ês ₂ / N _{oc2} each ±0.8 dB for PRBs #22-27	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
9.1.3.2 FDD Inter Frequency Relative RSRP Accuracy	Same as 9.1.3.1	Same as 9.1.3.1
9.1.4.1 TDD Inter Frequency Absolute RSRP Accuracy	Same as 9.1.3.1	Same as 9.1.3.1
9.1.4.2 TDD Inter Frequency Relative RSRP Accuracy	Same as 9.1.3.1	Same as 9.1.3.1
9.1.5.1 FDD - TDD Inter Frequency Absolute RSRP Accuracy	Noc1 and Noc2 each ±0.7 dB averaged over BWConfig Noc1 and Noc2 each ±1.0 dB for PRBs #22-27 Ês1/Noc1 and Ês2/Noc2 each ±0.3 dB averaged over BWConfig Ês1/Noc1 and Ês2/Noc2 each ±0.8 dB for PRBs #22-27	Note: N_{oc1} is the AWGN on cell 1 frequency $\hat{E}s_1/N_{oc1}$ is the ratio of cell 1 signal / AWGN N_{oc2} is the AWGN on cell 2 frequency $\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN
9.1.5.2 FDD - TDD Inter Frequency Relative Accuracy of RSRP	N _{oc1} and N _{oc2} each ±0.7 dB averaged over BW _{Config} N _{oc1} and N _{oc2} each ±1.0 dB for PRBs #22-27 Ês ₁ / N _{oc1} and Ês ₂ / N _{oc2} each ±0.3 dB averaged over BW _{Config} Ês ₁ / N _{oc1} and Ês ₂ / N _{oc2} each ±0.8 dB for PRBs #22-27	Note: $N_{\infty 1}$ is the AWGN on cell 1 frequency $\hat{E}s_1/N_{\infty 1}$ is the ratio of cell 1 signal / AWGN $N_{\infty 2}$ is the AWGN on cell 2 frequency $\hat{E}s_2/N_{\infty 2}$ is the ratio of cell 2 signal / AWGN

0.4.6.4.EDD Aboolisto DCDD Accessor (N .10 dD ======	Noto
9.1.6.1 FDD Absolute RSRP Accuracy for	N _{oc1} ±1.0 dB averaged	Note:
E-UTRA Carrier Aggregation	over BW _{Config}	N_{oc1} is the AWGN on frequency 1
	N _{oc1} ±1.3 dB for PRBs	Ês₁/N _{oc1} is the ratio of cell 1 signal / AWGN
	#22-27	
	N _{oc2} ±1.0 dB averaged	
	over BW _{Config}	N _{oc2} is the AWGN on frequency 2
	N _{oc2} ±1.3 dB for PRBs	Ês ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	#22-27	
		Ês ₃ / N _{oc2} is the ratio of cell 3 signal / AWGN
	$\hat{E}s_1/N_{oc1}, \hat{E}s_2/N_{oc2}$	
	and Ês ₃ / N _{oc2} each	
	±0.3 dB averaged over	$T_S = 1/(15000 \times 2048)$ seconds, the basic
	BW _{Config}	timing unit defined in TS 36.211 [9]
	Ês ₁ / N _{oc1} , Ês ₂ / N _{oc2}	
	and Ês ₃ / N _{oc2} each	
	±0.8 dB for PRBs #22-	
	27	
	21	
	<u>_</u>	
	Time alignment error	
	cell 2 rel. to cell 1:	
	Intra-band contiguous	
	CA: ±130 ns (±4Ts)	
	Intra-band non-	
	contiguous CA: ±260	
	ns (±8Ts)	
	Inter-band CA: ±260 ns	
	(±8Ts)	
9.1.6.2 FDD Relative RSRP Accuracy for	Same as 9.1.6.1	
E-UTRA Carrier Aggregation		
9.1.7.1 TDD Absolute RSRP Accuracy for	Same as 9.1.6.1	
E-UTRA Carrier Aggregation		
9.1.7.2 TDD Relative RSRP Accuracy for	Same as 9.1.6.1	
E-UTRA Carrier Aggregation	Same as 5.1.0.1	
	N 40 dD	Neter
9.1.8.1 FDD Absolute RSRP Accuracy	N _∞ ±1.0 dB averaged	Note:
under Time Domain Measurement	over BW _{Config}	Es₁/N _{oc} is the ratio of cell 1 signal / AWGN
Resource Restriction with Non-MBSFN	N_{∞} ±1.3 dB for PRBs	Ês₂/N₀c is the ratio of cell 2 signal / AWGN
ABS	#22-27	
	$\hat{E}s_1/N_{oc}$ and $\hat{E}s_2/N_{oc}$	
	each ±0.3 dB averaged	
	over BW _{Config}	
	$\hat{E}s_1/N_{oc}$ and $\hat{E}s_2/N_{oc}$	
	each ±0.8 dB for PRBs	
	#22-27	
9.1.8.2 FDD Relative RSRP Accuracy	Same as 9.1.8.1	
under Time Domain Measurement		
Resource Restriction with Non-MBSFN		
ABS		
9.1.9.1 TDD Absolute RSRP Accuracy	Same as 9.1.8.1	
under Time Domain Measurement		
Resource Restriction with Non-MBSFN		
ABS		
	0	
9.1.9.2 TDD Relative RSRP Accuracy	Same as 9.1.8.1	
under Time Domain Measurement		
Resource Restriction with Non-MBSFN		
ABS		
9.2.1.1 FDD Intra Frequency Absolute	N _{oc} ±0.7 dB averaged	Note:
RSRQ Accuracy	over BW _{Config}	Ês₁/N₀ is the ratio of cell 1 signal / AWGN
,	N _∞ ±1.0 dB for PRBs	Ês₂/N₀c is the ratio of cell 2 signal / AWGN
	#22-27	
	$\hat{E}s_1/N_{oc}$ and $\hat{E}s_2/N_{oc}$	
	each ±0.3 dB averaged	
	over BW _{Config}	
	$\hat{E}s_1/N_{\infty}$ and $\hat{E}s_2/N_{\infty}$	
1	each ±0.8 dB for PRBs	
	Cacil ±0.0 ab loi i 11bo	
	#22-27	
9.2.2.1 TDD Intra Frequency Absolute	#22-27	Same as 9.2.1.1
9.2.2.1 TDD Intra Frequency Absolute RSRQ Accuracy		Same as 9.2.1.1

9.2.3.1 FDD - FDD Inter Frequency Absolute RSRQ Accuracy	N _{oc1} ±0.7 dB averaged over BW _{Config}	Note: Ês ₁ / N _{oc1} is the ratio of cell 1 signal / AWGN
	$N_{\infty 1}$ ±1.0 dB for PRBs #22-27	on frequency 1 Es ₂ / N _{oc2} is the ratio of cell 2 signal / AWGN
	N _{oc2} ±0.7 dB averaged over BW _{Config}	on frequency 2
	N ₀₀₂ ±1.0 dB for PRBs #22-27	
	$\tilde{E}s_1/N_{oc1}$ and $\tilde{E}s_2/N_{oc2}$ each ±0.3 dB	
	averaged over BW _{Config}	
	$\hat{E}s_1/N_{oc1}$ and $\hat{E}s_2/N_{oc2}$ each ±0.8 dB for	
	PRBs #22-27	
9.2.3.2 FDD - FDD Inter Frequency Relative RSRQ Accuracy	Same as 9.2.3.1	
9.2.4.1 TDD - TDD Inter Frequency Absolute RSRQ Accuracy	Same as 9.2.3.1	
9.2.4.2 TDD - TDD Inter Frequency	Same as 9.2.3.1	
Relative RSRQ Accuracy		
9.2.4A.1 FDD - TDD Inter Frequency Absolute RSRQ Accuracy	Same as 9.2.3.1	
9.2.4A.2 FDD - TDD Inter Frequency	Same as 9.2.3.1	
Relative Accuracy of RSRQ	N 40 15	N
9.2.5.1 FDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation	N _{oc1} ±1.0 dB averaged over BW _{Config}	Note: N _{∞1} is the AWGN on frequency 1
L OTTATORITOT / Iggregation	$N_{\infty 1}$ ±1.3 dB for PRBs #22-27	Ês₁/N₀c₁ is the ratio of cell 1 signal / AWGN
	N _{oc2} ±1.0 dB averaged	
	over BW _{Config} N _{oc2} ±1.3 dB for PRBs	$N_{\infty 2}$ is the AWGN on frequency 2 $\hat{E}s_2/N_{\infty 2}$ is the ratio of cell 2 signal / AWGN
	#22-27	$\hat{E}s_2/N_{oc2}$ is the ratio of cell 2 signal / AWGN $\hat{E}s_3/N_{oc2}$ is the ratio of cell 3 signal / AWGN
	$\hat{E}s_1/N_{oc1}, \hat{E}s_2/N_{oc2}$	30.000
	and Ês ₃ / N _{oc2} each ±0.3 dB averaged over	T _S = 1/(15000 x 2048) seconds, the basic
	BW _{Config}	timing unit defined in TS 36.211 [9]
	$\hat{E}s_1/N_{oc1}, \hat{E}s_2/N_{oc2}$	
	and Ês ₃ / N _{oc2} each ±0.8 dB for PRBs #22-	
	27	
	Time alignment error	
	cell 2 rel. to cell 1:	
	Intra-band contiguous CA: ±130 ns (±4Ts)	
	Intra-band non-	
	contiguous CA: ±260	
	ns (±8Ts) Inter-band CA: ±260 ns	
	(±8Ts)	
9.2.5.2 FDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation	Same as 9.2.5.1	
9.2.6.1 TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation	Same as 9.2.5.1	
9.2.6.2 TDD Relative RSRQ Accuracy for	Same as 9.2.5.1	
E-UTRA Carrier Aggregation		
9.2.7.1 FDD RSRQ under Time Domain Measurement Resource Restriction with	N _{oc} ±1.0 dB averaged over BW _{Config}	Note: Ês₁/N∞ is the ratio of cell 1 signal / AWGN
Non-MBSFN ABS	Noc ±1.3 dB for PRBs	$ \hat{E}_{s_1}/N_{\infty} $ is the ratio of cell 1 signal / AWGN $ \hat{E}_{s_2}/N_{\infty} $ is the ratio of cell 2 signal / AWGN
	#22-27	
	$\hat{E}s_1/N_{oc}$ and $\hat{E}s_2/N_{oc}$ each ±0.3 dB averaged	
	over BW _{Config}	
	Ês₁/N₀c and Ês₂/N₀c	
	each ±0.8 dB for PRBs #22-27	
	# LL -LI	

0.0.0.1 TDD DCDO under Time a Democia	Comp. 00 0 7 4	Come on 0.0.7.4
9.2.8.1 TDD RSRQ under Time Domain	Same as 9.2.7.1	Same as 9.2.7.1
Measurement Resource Restriction with		
Non-MBSFN ABS		
9.3.1 E-UTRAN FDD - UTRA FDD CPICH	E-UTRA cell	Notes:
RSCP absolute accuracy	N _∞ ±0.7 dB averaged	
	over BW _{Config}	N₀c is the AWGN on cell 1 (E-UTRA) frequency
	Ês / N₀c ±0.3 dB	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	
		I _∞ is the AWGN on cell 2 (UTRA) frequency
	UTRA cell	I _{or} / I _{oc} is the ratio of cell 2 signal / AWGN
	I _{oc} ±0.7 dB	CPICH E _c / I _{or} is the fraction of cell 2 power
	$I_{or} / I_{oc} \pm 0.3 dB$	assigned to the CPICH Physical channel
	CPICH E _c / I _{or} ±0.1 dB	,
9.3.2 E-UTRAN TDD - UTRA FDD CPICH	Same as 9.3.1	
RSCP absolute accuracy	Samo as o.s. i	
9.4.1 E-UTRAN FDD – UTRA FDD CPICH	E-UTRA cell	Notes:
	N _∞ ±0.7 dB averaged	Notes.
Ec/No absolute accuracy	•	N is the AMCN on call 4 (E LITEA) from the control of
	over BW _{Config}	N _∞ is the AWGN on cell 1 (E-UTRA) frequency
	Ës / N _∞ ±0.3 dB	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	averaged over BW _{Config}	
		I _∞ is the AWGN on cell 2 (UTRA) frequency
	UTRA cell	I _{or} / I _{oc} is the ratio of cell 2 signal / AWGN
	I_{oc} ±0.7 dB	CPICH E _c / I _{or} is the fraction of cell 2 power
	$I_{or} / I_{oc} \pm 0.3 dB$	assigned to the CPICH Physical channel
	CPICH E _c / I _{or} ±0.1 dB	
9.4.2 E-UTRAN TDD – UTRA FDD CPICH	Same as 9.4.1	Same as 9.4.1
Ec/No absolute accuracy		
9.5.1 E-UTRAN FDD – UTRA TDD P-	E-UTRA cell	Notes:
CCPCH RSCP absolute accuracy	N _∞ ±1.0 dB averaged	N _∞ is the AWGN on cell 1 (E-UTRA) frequency
COI OI I NOCI absolute acculacy	over BW _{Config}	\hat{E} s / N_{∞} is the ratio of cell 1 signal / AWGN
	Ês / N _{oc} ±0.3 dB	ES / N ₀₀ IS the fatto of cell it signal / AVVGIV
	averaged over BW _{Config}	
	<u>UTRA cell</u>	
	$I_{\infty} \pm 0.7 \text{ dB}$	I _∞ is the AWGN on cell 2 (UTRA) frequency
	$I_{or} / I_{oc} \pm 0.3 dB$	I _{or} / I _{oc} is the ratio of cell 2 signal / AWGN
	PCCPCH E _C /l _{or} ±0.1	PCCPCH E _c / I _{or} is the fraction of cell 2 power
	dB	assigned to the PCCPCH Physical channel
	DwPCH_E _C /l _{or} ±0.1 dB	DwPCH_ E _c / I _{or} is the fraction of cell 2 power
	_	assigned to the DwPCH channel
9.5.2 E-UTRAN TDD – UTRA TDD P-	Same as 9.5.1	
CCPCH RSCP absolute accuracy	23.110 40 0.011	
9.6.1 GSM RSSI accuracy for E-UTRAN	E-UTRA Cell	Note:
FDD	N _{oc} ±1.0 dB averaged	N _{oc} is the AWGN on cell 1 frequency
	over BW _{Config}	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	Ês / N _∞ ±0.3 dB	
	averaged over BW _{Config}	
	GSM cell BCCH1	GSM cells BCCH 1 to 6 have only the wanted
	Signal level ±0.7 dB	signal, without AWGN
	GSM cell BCCH 2 to 6	
	Signal level ±2.0 dB	
9.6.2 GSM RSSI accuracy for E-UTRAN	E-UTRA Cell	Note:
TDD	N _∞ ±1.0 dB averaged	N _∞ is the AWGN on cell 1 frequency
	over BW _{Config}	Ês / N _∞ is the ratio of cell 1 signal / AWGN
	Ês / N _∞ ±0.3 dB	
	averaged over BW _{Config}	
	0014 " 700:::	
	GSM cell BCCH1	GSM cells BCCH 1 to 6 have only the wanted
	GSM cell BCCH1 Signal level ±0.7 dB	GSM cells BCCH 1 to 6 have only the wanted signal, without AWGN
	Signal level ±0.7 dB GSM cell BCCH 2 to 6	
	Signal level ±0.7 dB	

In addition, the following Test System uncertainties and related	
constraints apply.	
Any additional constraints are defined in the specific tests.	
AWGN Bandwidth	≥ 1.08MHz, 2.7MHz, 4.5MHz, 9MHz, 13.5MHz,
	18MHz;
	N _{RB} x 180kHz according to BW _{Config}
AWGN absolute power uncertainty	Test-specific
AWGN flatness and signal flatness, max deviation for any Resource Block, relative to average over BW _{Config}	±2 dB
AWGN peak to average ratio	≥10 dB @0.001%
Signal-to noise ratio uncertainty	Test-specific
Fading profile power uncertainty	±0.5 dB
Fading profile delay uncertainty, relative to frame timing	±5 ns (excludes absolute errors related to
	baseband timing)

F.2 Interpretation of measurement results (normative)

See TS 36.521-1[10] Annex F2.

F.3 Test Tolerance and Derivation of Test Requirements (informative)

See TS 36.521-1[10] Annex F3.

F.3.1 Measurement of test environments

See TS 36.521-1[10] Annex F3.1.

F.3.2 Measurement of RRM requirements

Because the relationships between the Test system uncertainties and the Test Tolerances are often complex, it is not always possible to give a simple derivation of the Test Requirement in this document. The analysis is recorded in 3GPP TR 36 903 [20].

Table F.3.2-1: Derivation of Test Requirements (RRM tests)

Test	Minimum Requirement in TS	Test Tolerance	Test Requirement in TS
	36.133	(TT)	36.521-3
4.2.1 E-UTRA FDD - FDD cell	During T1:	During T1:	During T1:
re-selection intra frequency	N₀: -98dBm/15kHz	0dB	N₀c: -98dBm/15kHz
	Ês₁/N∞: +16.00dB	0dB	Ês₁/N∞: +16.00dB
	Ês₂/N∞: -infinity	0dB	Ês₂/N₀c: -infinity
	During T2:	During T2:	During T2:
	N _∞ : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
	Ês ₁ / N _{oc} : +13.00dB	0dB	Ês ₁ / N _{oc} : +13.00dB
	Ês ₂ /N _{oc} : +16.00dB	+0.45dB	Ês ₂ /N _{oc} : +16.45dB
	During T3:	During T3:	During T3:
	N _{oc} : -98dBm /15kHz	0dB	N _{oc} : -98dBm /15kHz
	Ês ₁ / N _{oc} : +16.00dB	+0.45dB	Ês ₁ / N _{oc} : +16.45dB
	Ês ₂ /N _{oc} : +13.00dB	0dB	Ês ₂ / N _{oc} : +13.00dB
4.2.2 E-UTRATDD - TDD cell	Same as 4.2.1	Same as 4.2.1	Same as 4.2.1
re-selection intra frequency 4.2.3 E-UTRA FDD - FDD cell	During To:	During TO	During TO:
	During T0: N ₀₀₁ : -98dBm/15kHz	During T0: -1.1dB	During T0: N _{oc1} : -99.1dBm/15kHz
re-selection inter frequency	Roc1: -980BH/13KHZ Ês ₁ / N _{oc1} : -4.00dB	+0.3dB	Roc1 - 99.10Bm / 15km 2
	N _{∞2} : -98dBm/15kHz	-1.1dB	N ₀₀₂ : -99.1dBm/15kHz
	Ês ₂ / N _{oc2} : +14.00dB	+1.9dB	Ês ₂ / N _{oc2} : +15.90dB
	LS ₂ /N _{0C2} . +14.00dB	+1.9ub	LS ₂ /N _{0C} 2. +13.90db
	During T1:	During T1:	During T1:
	N _{oc1} : -98dBm/15kHz	-1.1dB	N _{0c1} : -99.1dBm/15kHz
	Ês ₁ / N _{oc1} : +14.00dB	+1.9dB	Ês ₁ / N _{oc1} : +15.90dB
	N _{∞2} : -98dBm/15kHz	-1.1dB	N _{0c2} : -99.1dBm/15kHz
	Ês ₂ / N _{oc2} : -4.00dB	+0.3dB	Ês ₂ / N _{oc2} : -3.70dB
	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	-1.1dB	N _{0c1} : -99.1dBm/15kHz
	Ês ₁ / N _{oc1} : +14.00dB	+1.9dB	Ês ₁ / N _{oc1} : +15.90dB
	N _{oc2} : -98dBm/15kHz	-1.1dB	N _{0c2} : -99.1dBm/15kHz
	$\hat{E}s_2/N_{\infty 2}$: -infinity	0dB	Ês₂/N _{∞2} : -infinity
	During T3:	During T3:	During T3:
	N _{oc1} : -98dBm /15kHz	-1.1dB	N _{oc1} : -99.1dBm /15kHz
	Ês ₁ / N _{oc1} : +14.00dB	+1.9dB	Ês ₁ / N _{oc1} : +15.90dB
	N _{oc2} : -98dBm/15kHz	-1.1dB	N _{oc2} : -99.1dBm/15kHz
	Ēs ₂ / N _{oc2} : +12.00dB	+1.9dB	Ês ₂ / N _{oc2} : +13.90dB
4.2.4 E-UTRA FDD - TDD cell	Same as 4.2.3	Same as 4.2.3	Same as 4.2.3
re-selection inter frequency			
4.2.5 E-UTRATDD - FDD cell	Same as 4.2.3	Same as 4.2.3	Same as 4.2.3
re-selection inter frequency	0	0	0
4.2.6 E-UTRATDD - TDD cell	Same as 4.2.3	Same as 4.2.3	Same as 4.2.3
re-selection inter frequency			

4.2.7 E-UTRA FDD Inter	During T0:	During T0:	During T0:
frequency re-selection in the	N _{oc1} : -98dBm/15kHz	OdB	N _{∞1} : -98dBm/15kHz
existence of non-allowed CSG	Ês ₁ /N _{oc1} : +13.00dB	0dB	Ês ₁ / N _{oc1} : +13.00dB
cell	A . ==.		
ceii	Es ₃ / N _{oc1} : -infinity	0dB	Es ₃ / N _{oc1} : -infinitydB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ës ₂ / N _{oc2} : -3.00dB	0dB	Ës ₂ / N _{oc2} : -3.00dB
	During T1:	During T1:	During T1:
	N _{∞1} : -98dBm/15kHz	0dB	N _{0c1} : -98dBm/15kHz
	Es ₁ / N _{oc1} : +8.00dB	-0.2dB	Ës ₁ / N _{oc1} : +7.80dB
	$\hat{E}s_3/N_{oc1}$: +8.00dB	0dB	$\hat{E}s_3/N_{oc1}$: +8.00dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : -infinity	0dB	Ês ₂ / N _{oc2} : -infinity
	, ,		,
	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	0dB	N _{∞1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : +8.00dB	0dB	Ês ₁ / N _{oc1} : +8.00dB
	Ês ₃ /N _{oc1} : +13.00dB	0dB	Ês ₃ / N _{∞1} : +13.00dB
		0dB	
	N _{oc2} : -98dBm/15kHz	0dB	N _{∞2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : +13.00dB	UUD	Ës ₂ /N _{oc2} : +13.00dB
	During TO	During T2:	Duning TO
	During T3:	During T3:	During T3:
	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
	Ës₁/N _{∞1} : +13.00dB	0dB	Ês₁/N _{∞1} : +13.00dB
	Ës ₃ / N _{oc1} : +38.00dB	0dB	Ês₃ / N _{oc1} : +38.00dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ēs ₂ / N _{oc2} : +8.00dB	0dB	Ês ₂ / N _{oc2} : +8.00dB
4.2.8 E-UTRA TDD Inter	Same as 4.2.7	Same as 4.2.7	Same as 4.2.7
frequency re-selection in the			
existence of non-allowed CSG			
cell			
4.3.1.1 E-UTRA FDD - UTR AN	During T1:	During T1:	During T1:
FDD cell reselection: UTRA	E-UTRA Cell 1		E-UTRA Cell 1
FDD is of higher priority	N _{oc} : -98.00dBm/15kHz	0dB	N _∞ : -98.00dBm/15kHz
1 22 to of higher phoney	Ês / N _{oc} : +14.00dB	+0.8dB	Ês / N _∞ : +14.80dB
	UTRA Cell 2	+0.00D	UTRA Cell 2
	I _∞ : -70.00dBm/3.84MHz	-0.1dB	I _∞ : -70.10dBm/3.84MHz
	I _{or} / I _{oc} : -∞dB	0dB	l _{or} / l _{oc} : -∞dB
		I .	
	CPICH_E _o /I _{or} : -10.00dB	0dB	CPICH_ E _o /I _{or} : -10.00dB
	During TO:	During TO:	During TO:
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	0.40	E-UTRA Cell 1
	N _∞ : -98.00dBm/15kHz	0dB	N _∞ : -98.00dBm/15kHz
	Ês / N _{oc} : +14.00dB	+0.8dB	Ës / N₀c: +14.80dB
	UTRA Cell 2		UTRA Cell 2
	I _{oc} : -70.00dBm/3.84MHz	-0.1dB	l _{oc} : -70.10dBm/3.84MHz
	I _{or} / I _{oc} : +11.00dB	+0.9dB	l _{or} / l _{oc} : +11.90dB
	CPICH_E ₀ /I _{or} : -10.00dB	0dB	CPICH_ E _c /I _{or} : -10.00dB
	During T3:	During T3:	During T3:
	E-UTRA Cell 1		E-UTRA Cell 1
	N _{oc} : -98.00dBm/15kHz	0dB	N _{oc} : -98.00dBm/15kHz
	Ês / N _{oc} : +14.00dB	+0.8dB	Ês / N _{oc} : +14.80dB
	UTRA Cell 2		UTRA Cell 2
	I _∞ : -70.00dBm/3.84MHz	-0.1dB	I _∞ : -70.10dBm/3.84MHz
	I _{or} / I _{oc} : -5.00dB	-0.7dB	l _{or} / l _{oc} : -5.70dB
		I .	
	CPICH_E _c /I _{or} : -10.00dB	0dB	CPICH_ E _c /I _{or} : -10.00dB

4.3.1.2 E-UTRAN FDD -	During T1:	During T1:	During T1:
UTRAN FDD cell re-selection:	E-UTRA Cell 1	During 11.	E-UTRA Cell 1
UTRA FDD is of lower priority	N _∞ : -98.00dBm/15kHz	-1.10dB	N _∞ : -99.10dBm/15kHz
le in the bloom phoney	Ês / N _{oc} : +12.00dB	+1.90dB	Ês / N _{oc} : +13.90dB
	UTRA Cell 2		UTRA Cell 2
	I₀: -70.00dBm/3.84MHz	0dB	I _∞ : -70.00dBm/3.84MHz
	I _{or} / I _{oc} : +13.00dB	+0.80dB	I _{or} / I _{oc} : +13.80dB
	CPICH_E _c /l _{or} : -10.00dB	0dB	CPICH_ E _c /I _{or} : -10.00dB
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	N _{oc} : -98.00dBm/15kHz	-1.10dB	N _{oc} : -99.10dBm/15kHz
	Ês / N _{oc} : -4.00dB	+0.30dB	Ês / N _{oc} : -3.70dB
	UTRA Cell 2		UTRA Cell 2
	I₀: -70.00dBm/3.84MHz	0dB	l _∞ : -70.00dBm/3.84MHz
	I _{or} / I _{oc} : +13.00dB	+0.80dB	I _{or} / I _{oc} : +13.80dB
	CPICH_E ₀ /I _{or} : -10.00dB	0dB	CPICH_ E _o /I _{or} : -10.00dB
4.3.1.3 EUTRA FDD-UTRA	During T1, T2:	During T1,T2	During T1, T2:
FDD cell reselection in fading	E-UTRA Cell 1	. ID	E-UTRA Cell 1
propagation conditions: UTRA	N _∞ : -104.00dBm/15kHz	0dB	N _∞ : -104.00dBm/15kHz
FDD is of lower priority	Ës / N _{oc} : +22.00dB	0dB	Ës / N _{oc} : +22.00dB
	UTRA Cell 2	0.40	UTRA Cell 2
	I _∞ : -70.00dBm/3.84MHz	0dB	I _∞ : -70.00dBm/3.84MHz
	l _{or} / l _{oc} : +13.00dB	+0.80dB	l _{or} / l _{oc} : +13.80dB
	CPICH_E _o /l _{or} : -10.00dB	0dB	CPICH_ E _c /I _{or} : -10.00dB
	During T3, T4:	During T3,T4	During T3. T4:
	E-UTRA Cell 1	During 15,14	E-UTRA Cell 1
	N _∞ : -104.00dBm/15kHz	0dB	N _∞ : -104.00dBm/15kHz
	Ês / N _∞ : -3.00dB	0dB	Ês / N _{oc} : -3.00dB
	UTRA Cell 2	042	UTRA Cell 2
	I _∞ : -70.00dBm/3.84MHz	0dB	I _∞ : -70.00dBm/3.84MHz
	I _{or} / I _{oc} : +13.00dB	+0.80dB	I _{or} / I _{oc} : +13.80dB
	CPICH_E _c /I _{or} : -10.00dB	0dB	CPICH_ E _c /I _{or} : -10.00dB
4.3.2 E-UTRA FDD - UTRAN	During T1:	During T1:	During T1:
TDD cell re-selection	E-UTRA Cell 1		E-UTRA Cell 1
	N _{oc} : -98.0dBm/15kHz	0dB	N _{oc} : -98.0dBm/15kHz
	Ês / N∞: +11.00dB	0dB	Ês / N _{oc} : +11.00dB
	UTRA Cell 2		UTRA Cell 2
	l _∞ : -80.0dBm/1.28MHz	0dB	l _{oc} : -80.0dBm/1.28MHz
	lor / loc: +11.0dB	0dB	lor / loc: +11.0dB
	PCCPCH_E _o /l _{or} : -3dB	0dB	PCCPCH_E _o /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	During T2.	During TO:	During T2:
	During T2: E-UTRA Cell 1	During T2:	During T2: E-UTRA Cell 1
	N _{oc} : -98.0dBm/15kHz	0dB	N _{cc} : -98.0dBm/15kHz
	Ês / N _{oc} : -3.0dB	0dB	Ês / N _{oc} : -3.0dB
	UTRA Cell 2	Jour	UTRA Cell 2
	I _{oc} : -80.0dBm/1.28MHz	0dB	I _{oc} : -80.0dBm/1.28MHz
	Î _{or} / I _{oc} : +11.0dB	0dB	Î _{or} / I _{oc} : +11.0dB
	PCCPCH_E _c /I _{or} : -3dB	0dB	PCCPCH_E _c /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
4.3.3 E-UTRAN TDD - UTRAN	Same as 4.3.1.2	Same as 4.3.1.2	Same as 4.3.1.2
FDD cell re-selection: UTRA			
FDD is of lower priority			
	1	t	l .

4.3.4.1 E-UTRATDD - UTRAN	During T1:	During T1:	During T1:
TDD cell re-selection : UTRA is	E-UTRA Cell 1		=
of higher priority	Noc: -98dBm/15kHz	0dB	N₀: -98.0dBm/15kHz
	Ês / Noc: +11.00dB	0dB	Ês / N₀: +11.0dB
	UTRA Cell 2		
	loc: -80dBm/1.28MHz	0dB	l _∞ : -80.0dBm/1.28MHz
	Îor / loc: -infinity	0dB	I _{or} / I _{oc} : -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	<u>=g . = .</u>	<u>g</u>
	Noc: -98dBm /15kHz	0dB	N _{oc} : -98.0dBm /15kHz
	Ês / Noc: +11.00dB	0dB	Ês / N∞: +11.0dB
	UTRA Cell 2		
	loc: -80dBm/1.28MHz	0dB	l _∞ : -80.0dBm/1.28MHz
	lor / loc: +11.00dB PCCPCH_Ec/lor: -3dB	0dB 0dB	l_{or} / l_{oc} : +11.0dB PCCPCH_E _c / l_{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_E ₀ /I _{or} : 0dB
	DWI CII_EC/IOI. 00B	Oub	DWI CII_L@Ior. Odb
	During T3:	During T3:	During T3:
	E-UTRA Cell 1		
	Noc: -98dBm/15kHz	0dB	N₀: -98.0dBm/15kHz
	Ês / Noc: +11.00dB	0dB	Ês / N₀: +11.0dB
	UTRA Cell 2	0.40	L . 00 0 dD /4 00ML-
	loc: -80dBm/1.28MHz lor / loc: -3.00dB	0dB 0dB	l _{oc} : -80.0dBm/1.28MHz
	PCCPCH_Ec/lor: -3dB	0dB	I_{or} / I_{oc} : -3.0dB PCCPCH_E ₀ / I_{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_E ₀ /I _{or} : 0dB
4.3.4.2 E-UTRA TDD - UTR AN	Same as 4.3.2	Same as 4.3.2	Same as 4.3.2
TDD cell re-selection : UTRA is			
of lower priority			
4.3.4.3 EUTRA TDD-UTRA	During T1, T2:	During T1, T2:	During T1, T2:
TDD cell reselection in fading	E-UTRA Cell 1	0.15	E-UTRA Cell 1
propagation conditions: UTRA	N 404 0 dD /451d l-	0dB	N . 4040-ID (451-II-
TDD is of lower priority	N _∞ : -104.0dBm/15kHz Ês / N _∞ : +22.00dB	0dB	N _{oc} : -104.0dBm/15kHz Ês / N _{oc} : +22.00dB
	UTRA Cell 2	0dB	UTRA Cell 2
	I _∞ : -80.0dBm/1.28MHz	0dB	l _∞ : -80.0dBm/1.28MHz
	Î _{or} / I _{oc} : +13.0dB	0dB	Î _{or} / I _{oc} : +13.0dB
	PCCPCH_E ₀ /I _{or} : -3dB	0dB	PCCPCH_E _o /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB		DwPCH_Ec/lor: 0dB
		During T3, T4:	
	During T3, T4:	0.15	During T3, T4:
	E-UTRA Cell 1	0dB	E-UTRA Cell 1
	N _∞ : -104.0dBm/15kHz	0dB	N _{oc} : -104.0dBm/15kHz
	Ês / N _∞ : -3.0dB	0dB	Ês / N _{oc} : -3.0dB
	UTRA Cell 2	0dB	UTRA Cell 2
	I _∞ : -80.0dBm/1.28MHz	0dB	l _{oc} : -80.0dBm/1.28MHz
	Î _{or} / I _{oc} : +13.0dB	0dB	Î₀r / I₀c: +13.0dB
	PCCPCH_E _o /l _{or} : -3dB		PCCPCH_E _o /I _{or} : -3dB
444EUTDANEDD COM	DwPCH_Ec/lor: 0dB	Durin T1	DwPCH_Ec/lor: 0dB
4.4.1 E-UTRAN FDD - GSM	During T1: E-UTRA Cell 1	During T1:	During T1: E-UTRA Cell 1
cell re-selection	N _∞ : -98.00dBm/15kHz	-1.1dB	N _∞ : -99.10dBm/15kHz
	Ês / N _{oc} : +9.00dB	+0.9dB	Ês / N _{oc} : +9.90dB
	GSM Cell 2	. 0.045	GSM Cell 2
	Signal level: -90.00dBm	0dB	Signal level: -90.00dBm
	During T2:	Duning TO:	During TO:
	During T2: E-UTRA Cell 1	During T2:	During T2: E-UTRA Cell 1
	N _∞ : -98.00dBm/15kHz	-1.1dB	N _∞ : -99.10dBm/15kHz
	Ês / N _∞ : -4.00dB	+0.3dB	Ês / N₀c: -3.70dB
	GSM Cell 2	.0.005	GSM Cell 2
	Signal level: -75.0dBm	0dB	Signal level: -75.00dBm
4.4.2 E-UTRAN TDD - GSM	Same as 4.4.1	Same as 4.4.1	Same as 4.4.1
cell re-selection			

4.5.1.1 RRC IDLE / E-UTRAN to HRPD Cell re-selection / E-	During T1: E-UTRA Cell 1	During T1	During T1: E-UTRA Cell 1
UTRAN FDD - HRPD cell re-	N _{oc} : -98.00dBm/15kHz	-1.1dB	N₀c: -99.1dBm/15kHz
selection: HRPD is of lower	Ës / N₀: +9.00dB	0.9dB	Ës / N₀: +9.90dB
priority	HRPD Cell 2 I _{oc} : -55.00dBm/1.2288MHz	0dB	HRPD Cell 2 I _∞ : -55.00dBm/1.2288MHz
	I _{or} / I _{oc} : 0 dB	0dB	I _{or} / I _{oc} : 0 dB
	During T2:	During T2	During T2:
	E-UTRA Cell 1 N _{oc} : -98.00dBm/15kHz	-1.1dB	E-UTRA Cell 1 N∞: -99.1dBm/15kHz
	Ês / N _∞ : -4.00dB	0.3dB	Ês / N _∞ : -3.70dB
	HRPD Cell 2		HRPD Cell 2
	I _∞ : -55.00dBm/1.2288MHz	0dB	l _∞ : -55.00dBm/1.2288MHz
4.5.2.1 E-UTRAN TDD - HRPD	I _{or} / I _∞ : 0 dB Same as 4.5.1.1	0dB Same as 4.5.1.1	l _{or} / l _{oc} : 0 dB Same as 4.5.1.1
Cell Reselection: HRPD is of	Jame 45 4.5.1.1	Odine do 4.5.1.1	Came as 4.0.1.1
Lower Priority			
5.1.1 E-UTRAN FDD-FDD	During T1: N _∞ : -98dBm/15kHz	During T1: 0dB	During T1: N _{oc} : -98dBm/15kHz
Handover intra frequency case	Rogit - 98dBm/15kH2 Ês ₁ / N _{oc} : +8.00dB	0dB	\hat{E}_{s_1}/N_{oc} : +8.00dB
	$ \hat{E}_{s_2}/N_{\infty} $: -infinity	0dB	$\hat{E}s_2/N_{oc}$: -infinity
	During T2: N _{oc} : -98dBm/15kHz	During T2:	<u>During T2:</u> N _∞ : -98dBm/15kHz
	$ \hat{\mathbf{E}}_{s_1}/N_{\infty} $: +8.00dB	0dB 0dB	\hat{E}_{s_1}/N_{oc} : +8.00dB
	Ês₂/N₀: +11.00dB	+0.5dB	Ês ₂ / N _o : +11.50dB
	During T3:	During T3:	During T3:
	N _{oc} : -98dBm /15kHz Ês ₁ / N _{oc} : +8.00dB	0dB 0dB	N _∞ : -98dBm /15kHz Ês ₁ / N _∞ : +8.00
	Ês₂/N₀: +11.00dB	+0.5dB	Ês₂/N₀: +11.50dB
5.1.2 E-UTRAN TDD-TDD	Same as 5.1.1	Same as 5.1.1	Same as 5.1.1
Handover intra frequency case			
5.1.3 E-UTRAN FDD-FDD	During T1: N ₀₀₁ : -98dBm/15kHz	During T1: 0dB	During T1: N _{cc1} : -98dBm/15kHz
Handover inter frequency case	Roc1960BH/15KH2 Ês ₁ / N ₀₀₁ : +4dB	0dB	Ês ₁ / N _{oc1} : +4dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ / N ₀₀₂ : -infinity		Ês ₂ / N _{oc2} : -infinity
	During T2:	During To	Durina T2:
	$N_{\infty 1}$: -98dBm/15kHz	During T2: 0dB	During 12: N _{∞1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : +4dB	0dB	Ês ₁ / N _{oc1} : +4dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ /N _{oc2} : +7.0dB	0.1dB	Ês ₂ / N _{∞2} : +7.10dB
	During T3:	During T3:	During T3:
	N _{∞1} : -98dBm /15kHz	0dB	N _{∞1} : -98dBm /15kHz
	Ês ₁ / N _{oc1} : +4dB	0dB	Ês ₁ / N _{oc1} : +4dB
	N _{∞2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
5.1.4 E-UTRAN TDD-TDD	Ês ₂ / N _{oc2} : +7.0dB Same as 5.1.3	+0.1dB Same as 5.1.3	Ës ₂ / N _{∞2} : +7.10dB Same as 5.1.3
Handover inter frequency case	Jame as J.1.J	Jame as J.T.S	Carrie as U.T.S
5.1.5 E-UTRAN FDD-FDD	During T1:	During T1:	During T1:
inter-frequency Handover with	Noc1: -98dBm/15kHz	0dB	Noc1: -98dBm/15kHz
unknown target cell	Ës1/Noc1: +4dB	0dB	Ës1/Noc1: +4dB
	Noc2: -98dBm/15kHz Ês2 / Noc2: -infinity	0dB	Noc2: -98dBm/15kHz Ês2 / Noc2: -infinity
	202 / 14002 Hillinty		
	During T2:	During T2:	During T2:
	Noc1: -98dBm/15kHz	0dB	Noc1: -98dBm/15kHz
	Ës1/Noc1:+4dB Noc2:-98dBm/15kHz	0dB 0dB	Ës1 / Noc1: +4dB Noc2: -98dBm/15kHz
	Ês2 / Noc2: +7.0dB	0dB	Ês2/Noc2: +7.0dB
	_ · · · · · · · · · · · · · · · · · · ·	1 -	

S.1.6 E-UTRAN TDD-TDD Noc1: -98dBm/15kHz Es1 / Noc1: -98dBm/15kHz Es1 / Noc1: -4dB Noc2: -98dBm/15kHz Es2 / Noc2: -infinity Noc1: -98dBm/15kHz Es2 / Noc2: -infinity Noc1: -98dBm/15kHz Es2 / Noc2: -infinity Noc2: -98dBm/15kHz Es2 / Noc2: -infinity Noc2: -98dBm/15kHz Es2 / Noc2: -infinity Noc1: -98dBm/15kHz Es1 / Noc1: -4dB Noc2: -98dBm/15kHz Es2 / Noc2: -98dBm/15kHz Se3 / Noc3: -98dBm/15kHz Se3 / Noc3: -98dBm/1
unknown target cell És 1 / Noc1: +4dB Noc2: -98dBm/15kHz És 2 / Noc2: -infinity 0dB És 1 / Noc1: +4dB Noc2: -98dBm/15kHz És 2 / Noc2: -infinity During T2: Noc1: -98dBm/15kHz És 1 / Noc1: +4dB Noc2: -98dBm/15kHz És 1 / Noc1: +4dB Noc2: -98dBm/15kHz És 2 / Noc2: +5.0dB 0dB DdB DdB Noc2: -98dBm/15kHz Es 1 / Noc1: +4dB Noc2: -98dBm/15kHz Es 2 / Noc2: +5.0dB 5.1.7 E-UTRAN FDD-TDD Handover inter frequency case Same as 5.1.3 Same as 5.1.3 5.1.8 E-UTRAN FDD - FDD Handover inter frequency case Same as 5.1.3 Same as 5.1.3 5.2.1 E-UTRAN FDD - UTRAN FDD handover During T1: E-UTRA Cell 1 Noc: -98dBm/15kHz És / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz És / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -1.80dB During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz És / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -1.80dB During T2: E-UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -1.80dB
Noc2: -98dBm/15kHz
Es2 / Noc2: -infinity
During T2: Noc1: -98dBm/15kHz Es 1 / Noc1: -98dBm/15kHz Es 1 / Noc1: -98dBm/15kHz Es 1 / Noc1: -98dBm/15kHz Es 1 / Noc1: -98dBm/15kHz Es 1 / Noc1: -98dBm/15kHz Es 2 / Noc2: -98dBm/15kHz Es 2 / Noc3: -98dBm/15kHz Es 1 / Noc3: -98dBm/15kHz Es 1 / Noc3: -98dBm/15kHz Es 1 / Noc3: -98dBm/15kHz OdB OdB OdB OdB OddBm/3.84MHz OdB OdB OddBm/3.84MHz OdB OdB OddBm/3.84MHz OdB OdB OddBm/3.84MHz OdB OdbBm/3.84MHz OdbBm/3.84MHz OdbBm/3.84MHz OdbBm/3.84MHz OdbBm/3.84MHz OdbBm/3.84MHz OddBm/3.84MHz O
Noc1: -98dBm/15kHz
Noc1: -98dBm/15kHz
\$\frac{\text{\text{\colored}}{\text{\colored}}\$\text{\colored}{\text{\colored}}\$\text{\colored}{\text{\colored}}\$\text{\colored}{\text{\colored}}\$\text{\colored}{\c
Noc2: -98dBm/15kHz
Es2 / Noc2: +5.0dB
Same as 5.1.3 Same as 5.1.
Handover inter frequency case
Same as 5.1.3 Same as 5.1.
Handover inter frequency case
During T1:
E-UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: -0.80dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -1.80dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB loc: -70dBm/3.84MHz lor / loc:-1.80dB
Noc: -98dBm/15kHz
Ês / Noc: 0.00dB
UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc: -infinity UTRA Cell 2 loc: -70dBm/3.84MHz OdB UTRA Cell 1 Noc: -98dBm/15kHz Noc: -98dBm/15kHz Noc: -0.80dB UTRA Cell 2 loc: -70dBm/3.84MHz OdB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB
loc: -70dBm/3.84MHz
During T2:
During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: -98dBm/15kHz Ês / Noc: -98dBm/15kHz Ês / Noc: -0.80dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB
E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: -9.80dB UTRA Cell 2 UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB
E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: 0.00dB UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: -9.80dB UTRA Cell 2 UTRA Cell 2 loc: -70dBm/3.84MHz lor / loc:-1.80dB
E-UTRA Cell 1 Noc: -98dBm/15kHz
Noc: -98dBm/15kHz 0dB Noc: -98dBm/15kHz Ês / Noc: 0.00dB -0.80dB Ês / Noc: -0.80dB UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 loc: -70dBm/3.84MHz 0dB loc: -70dBm/3.84MHz lor / loc:-1.80dB 0dB lor / loc:-1.80dB
Ês / Noc: 0.00dB -0.80dB Ês / Noc: -0.80dB UTRA Cell 2 UTRA Cell 2 loc: -70dBm/3.84MHz 0dB loc: -70dBm/3.84MHz lor / loc:-1.80dB 0dB lor / loc:-1.80dB
UTRA Cell 2 UTRA Cell 2 loc: -70dBm/3.84MHz OdB loc: -70dBm/3.84MHz lor / loc:-1.80dB lor / loc:-1.80dB
loc: -70dBm/3.84MHz
lor / loc:-1.80dB
During T2: During T2:
Hilling 13. Hilling 13. Hilling 13.
Duffing 15. Duffing 15.
E-UTRA Cell 1 E-UTRA Cell 1
Noc: -98dBm/15kHz 0dB Noc: -98dBm/15kHz
Ês / Noc: 0.00dB
UTRA Cell 2 UTRA Cell 2
loc: -70dBm/3.84MHz
lor / loc:-1.80dB
5.2.2 E-UTRAN TDD - UTRAN Same as 5.2.1 Same as 5.2.1 Same as 5.2.1
5.2.3 E-UTRAN FDD - GSM During T1: During T1: During T1:
handover E-UTRA Cell 1 E-UTRAN Cell 1
N _∞ : -98dBm/15kHz
$ \ddot{E}s/N_{\infty}: +4dB $ $ \ddot{O}dB $ $ \ddot{E}s/N_{\infty}: +4dB $ $ \ddot{G}SM $ $ \ddot{C}SM $
Signal level: -85dBm OdB Signal level: -85dBm
During T2: During T2: During T2:
E-UTRA Cell 1 E-UTRA Cell 1
N _∞ : -98dBm/15kHz
\hat{E} s / N_{∞} : +4dB
GSM Cell 2 GSM Cell 2
Signal level: -75dBm OdB Signal level: -75dBm
During T3: During T3: During T3:
E-UTRA Cell 1
N _∞ : -98dBm /15kHz
$ \hat{E}s/N_{\infty}: +4dB $ $ OdB $ $ \hat{E}s/N_{\infty}: +4dB $
GSM Cell 2 GSM Cell 2
Signal level: -75dBm 0dB Signal level: -75dBm

5.2.4 E-UTRATDD – UTRA	During T1:	During T1:	During T1:
TDD handover	E-UTRA Cell 1	During 11.	Burning 11.
TDD Haridovor	N _{oc} : -98dBm/15kHz	-1.05dB	N _∞ : -99.05dBm/15kHz
	Ê _s / N _∞ : +13.00dB	2.1dB	Ês / N _{oc} : +15.1dB
	UTRA Cell 2		
	I _{oc} : -80dBm/1.28MHz	-0.8dB	I _{oc} : -80.8dBm/1.28MHz
	Î _{or} / I _{oc} : -3.00dB	0dB	Î _{or} / I _{oc} : -3.0dB
	PCCPCH Ec/lor: -3dB	0dB	PCCPCH_Ec/lor: -3dB_
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	DWI CIT EC/IOI. Odb	042	DWI CIT LC/IOI. 00B
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		
	N _{oc} : -98dBm/15kHz	-1.05dB	N _{oc} : -99.05dBm/15kHz
	Ês / N₀: -3.00dB	0dB	Ês / N _{oc} : -3.0dB
	UTRA Cell 2		00 1 11
	I _{oc} : -80dBm/1.28MHz	-0.8dB	I _{oc} : -80.8dBm/1.28MHz
	Î _{or} / I _{oc} : 11.00dB	1.6dB	Î _{or} / I _{oc} : 12.6dB
	PCCPCH_Ec/lor: -3dB	0dB	PCCPCH Ec/lor: -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	<u> </u>		BWI CIT LONGI. CGB
	During T3:	During T3:	During T3:
	E-UTRA Cell 1	1.05dP	
	N _∞ : -98dBm/15kHz	-1.05dB	N _{oc} : -99.05dBm/15kHz
	Ês / N₀c: -3.00dB	0dB	Ës / N _{oc} : -3.0dB
	UTRA Cell 2	-0.8dB	
	l _{oc} : -80dBm/1.28MHz	+1.6dB	l _{oc} : -80.8dBm/1.28MHz
	\hat{I}_{or}/I_{oc} : 11.00dB	10dB	Î _{or} / I _{oc} : 12.6dB
	PCCPCH Ec/lor: -3dB	0dB	PCCPCH Ec/lor: -3dB
	DwPCH_Ec/lor: 0dB		DwPCH_Ec/lor: 0dB
5.2.5 E-UTRA FDD – UTRA	Same as 5.2.4	Same as 5.2.4	Same as 5.2.4
TDD handover			
5.2.6 E-UTRATDD - GSM	Same as 5.2.3	Same as 5.2.3	Same as 5.2.3
handover			
5.2.7 E-UTRAN FDD - UTRAN	During T1:	During T1:	During T1:
FDD handover: unknown target			E-UTRA Cell 1
cell	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ës / Noc: 0dB	0dB	Ës / Noc: 0dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -infinity		lor / loc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	Dulling 12.	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 0dB	0dB	Ês / Noc: 0dB
	UTRA Cell 2	oub	IUTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -1.8 dB	0dB	lor / loc: -1.8dB
5.2.8 E-UTRAN FDD - GSM	During T1:	During T1:	During T1:
handover: unknown target cell	E-UTRA Cell 1	Jamiy 11.	E-UTRA Cell 1
inandovor. driknown target cell	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
		0dB	Ês / Noc: +4dB
	IES / NOC: +40B		
	Ës / Noc: +4dB GSM Cell 2	ОСВ	
	GSM Cell 2	OGB	GSM Cell 2
		ous	
	GSM Cell 2 Signal level: -infinity During T2:	During T2:	GSM Cell 2 Signal level: -infinity During T2:
	GSM Cell 2 Signal level: -infinity		GSM Cell 2 Signal level: -infinity
	GSM Cell 2 Signal level: -infinity During T2:	During T2:	GSM Cell 2 Signal level: -infinity During T2:
	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB	During T2:	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB
	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2	During T2: 0dB 0dB	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2
	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2 Signal level: -75 dBm	During T2: 0dB 0dB 0dB	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2 Signal level: -75 dBm
5.2.9 E-UTRAN TDD – GSM handover: unknown target cell	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2	During T2: 0dB 0dB	GSM Cell 2 Signal level: -infinity During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz Ês / Noc: +4dB GSM Cell 2

E O 40 E LITE AN TED	D T4 .	D T4 .	Desiring at T4 :
5.2.10 E-UTRAN TDD -	During T1:	During T1:	During T1:
UTRAN TDD HO test:	E-UTRA Cell 1		E-UTRA Cell 1
unknown target cell	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
_	Ês / Noc: 3dB	0dB	Ês / Noc: 3dB
	UTRA Cell 2		UTRA Cell 2
	loc: -80dBm/1.28MHz	0dB	loc: -80dBm/1.28MHz
	lor / loc: -infinity	ООВ	lor / loc: -infinity
	lor / locinimity		lor / locinlinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	9	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 3dB	0dB	Ês / Noc: 3dB
	UTRA Cell 2	ОЦВ	UTRA Cell 2
		0.40	
	loc: -80dBm/1.28MHz	0dB	loc: -80dBm/1.28MHz
	lor / loc: 13 dB	0dB	lor / loc: 13 dB
	PCCPCH_E ₀ /I _{or} : -3.00dB	0dB	PCCPCH_E ₀ /I _{or} : -3.00dB
	DwPCH_E _o /I _{or} : 0dB	0dB	DwPCH_E ₀ /I _{or} : 0dB
5.3.1 RRC CONNECTED /	During T1:	During T1:	During T1:
Handover from E-UTRAN to	E-UTRA Cell 1		
non-3GPP RATs / E-UTRAN	N _{oc} : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
FDD – HRPD handover	Ê _s / N _{oc} : 0dB	-0.8dB	Ê _s / N _{oc} : -0.8dB
	HRPD Cell 2	0.00.2	_3,1100.0100.2
	I _∞ : -55.00dBm/1.2288MHz	0dB	I _∞ : -55.00dBm/1.2288MHz
		OGB	
	l _{or} / l _∞ : -infinity		I _{or} / I _{oc} : -infinity
	During T2:	During T2:	During T2:
		During 12.	During 12.
	E-UTRA Cell 1	0.40	N 00 dD (4 ELL I-
	N _{oc} : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
	Ê _s / N _∞ : 0dB	-0.8dB	Ë _s / N _{oc} : -0.8dB
	HRPD Cell 2		
	l _{oc} : -55.00dBm/1.2288MHz	0dB	l _{oc} : -55.00dBm/1.2288MHz
	I _{or} / I _{oc} : 0 dB	0dB	I _{or} / I _{oc} : 0 dB
	During T3:	During T3:	During T3:
	E-UTRA Cell 1		
	N _∞ : -98dBm/15kHz	0dB	N _∞ : -98dBm/15kHz
	Ê _s / N _{oc} : 0dB	-0.8dB	\hat{E}_s / N_{oc} : -0.8dB
	HRPD Cell 2		
	I _∞ : -55.00dBm/1.2288MHz	0dB	I _{oc} : -55.00dBm/1.2288MHz
	I _{or} / I _{oc} : 0 dB	0dB	I _{or} / I _{oc} : 0 dB
	10,7 100. 5 42	OGB	10,710,.042
5.3.5 E-UTRAN TDD - HRPD	Same as 5.3.1	Same as 5.3.1	Same as 5.3.1
handover			
6.1.1 E-UTRAN FDD Intra-	During T1:	During T1:	During T1:
frequency RRC Re-	N _∞ : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
establishment	Ês₁/N₀: +7.00dB	0dB	Ês ₁ / N _o : +7.00dB
establishinent			
	Ës ₂ /N _{oc} : +4.00dB	0dB	Ës ₂ /N _{oc} : +4.00dB
	During T2:	During T2:	During T2:
	N _{oc} : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
	Es₁/N₀c: -infinity	0dB	$\hat{E}s_1/N_{\infty}$: -infinity
	Ës ₂ / N _{oc} : +4.00dB	0dB	Ês ₂ / N _{oc} : +4.00dB
	Desire TO	Duning TO	Desire to TO
	During T3:	During T3:	During T3:
	N _∞ : -98dBm /15kHz	0dB	N _{oc} : -98dBm /15kHz
	Ês₁/N₀: -infinity	0dB	Ês₁/N∞: -infinity
	Ês ₂ / N _{oc} : +4.00dB	0dB	Ês ₂ / N _{oc} : +4.00dB
	•	•	•

6.1.2 E-UTRAN FDD Inter-	During T1:	During T1:	During T1:
frequency RRC Re-	During T1: N _{∞1} : -98dBm/15kHz	OdB	During T1: N _{oc1} : -98dBm/15kHz
establishment	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
	N _{∞2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês₂/N _{∞2} : -infinity	0dB	Ês₂/N _{∞2} : -infinity
	Description TO	Desire TO:	Duning TO
	During T2:	During T2:	During T2:
	N _{∞1} : -98dBm/15kHz	0dB	N _{∞1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : -infinity	0dB	Ês₁ / N _{oc1} : -infinity
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês₂ / N _{oc2} : -infinity	0dB	Ês₂/N _{oc2} : -infinity
	During T3:	During T3:	During T3:
	N _{oc1} : -98dBm /15kHz	0dB	N _{oc1} : -98dBm /15kHz
	Ês ₁ / N _{oc1} : -infinity	0dB	Ês ₁ / N _{oc1} : -infinity
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ /N _{oc2} : +7.00dB	0dB	Ês ₂ / N _{oc2} : +7.00dB
6.1.3 E-UTRAN TDD Intra-	Same as 6.1.1	Same as 6.1.1	Same as 6.1.1
frequency RRC Re- establishment	Same as 6.1.1	Same as 6.1.1	Same as o.i.i
6.1.4 E-UTRAN TDD Inter-	Same as 6.1.3	Same as 6.1.3	Same as 6.1.3
frequency RRC Re-	Jame as U.1.5	Jaille as U.I.S	Carrie as U. 1.3
establishment	Table and Table		Tank A and Tank O
6.2.1 E-UTRAN FDD -	Test 1 and Test 2		Test 1 and Test 2
Contention Based Random	Absolute uplink power:		Absolute uplink power:
Access Test	Normal conditions ±9dB	1.1dB	Normal conditions ±10.1dB
	Extreme conditions ±12dB	1.1dB	Extreme conditions ±13.1dB
	Relative uplink powerstep:		Relative uplink powerstep:
	Normal conditions ±3dB	0.7dB	Normal conditions ±3.7dB
	Extreme conditions ±5dB	0.7dB	Extreme conditions ±5.7dB
	Uplink timing T _e : ±12T _s	3Ts	Uplink timing T _e : ±15T _s
6.2.2 E-UTRAN FDD - Non	Same as 6.2.1	Same as 6.2.1	Same as 6.2.1
Contention Based Random			
Access Test			
6.2.3 E-UTRAN TDD -	Same as 6.2.1	Same as 6.2.1	Same as 6.2.1
Contention Based Random			
Access Test			
6.2.4 E-UTRAN TDD - Non	Same as 6.2.1	Same as 6.2.1	Same as 6.2.1
Contention Based Random	Jame as 0.2.1	Game as 0.2.1	Jame as 0.2.1
Access Test			
	During T1:	During T1:	During T1:
6.3.1 Redirection from E-	During 11:	During 11:	During 11:
UTRAN FDD to UTRAN FDD	E-UTRA Cell 1	0.10	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4dB	0dB	Ês / Noc: +4dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -infinity		lor / loc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 4dB	0dB	Ês / Noc: 4dB
	UTRA Cell 2	1	UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: 0.02 dB	0.4dB	lor / loc: 0.42dB
6.3.2 Redirection from E-	Same as 6.3.1	Same as 6.3.1	Same as 6.3.1
	<u>Same as 0.3.1</u>	<u>Jaille as 0.3.1</u>	Same as U.S.1
UTRAN TDD to UTRAN FDD			

6.3.3 Redirection from E-	During T1:	During T1:	During T1:
	During T1:	During T1:	During T1:
UTRAN FDD to GERAN when System Information is provided	E-UTRA Cell 1 Noc: -98dBm/15kHz	0dB	E-UTRA Cell 1 Noc: -98dBm/15kHz
System information is provided	Noc: -98abm/15kH2 Ês / Noc: +4dB	0dB	lÊs / Noc: +4dB
	IGSM Cell 2	UUD	GSM Cell 2
	Signal level: -infinity		Signal level: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ës / Noc: +4dB	0dB	Ês / Noc: +4dB
	GSM Cell 2		GSM Cell 2
	Signal level: -75 dBm	0dB	Signal level: -75 dBm
6.3.4 Redirection from E-	Same as 6.3.3	Same as 6.3.3	Same as 6.3.3
UTRAN TDD to GER AN when			
System Information is provided	D : T	- - -	D : T
6.3.5 E-UTRATDD RRC	During T1:	During T1:	During T1:
connection release redirection	E-UTRA Cell 1	0.15	E-UTRA Cell 1
to UTRA TDD	N _{oc} : -98.0dBm/15kHz	0dB	N _∞ : -98.0dBm/15kHz
	Ês / N _{oc} : +4.00dB	0dB	Ês / N₀c: +4.00dB
	UTRA Cell 2	040	UTRA Cell 2
	I _∞ : -80.0dBm/1.28MHz	0dB	l _{oc} : -80.0dBm/1.28MHz
	l _{or} / l _∞ : -infinity	0dB	Î _{or} / I _{oc} : -infinity
	PCCPCH_E _o /I _{or} : -4.77dB	0dB	PCCPCH_E _c /I _{or} : -4.77dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	N _{oc} : -98.0dBm/15kHz	0dB	N _{oc} : -98.0dBm/15kHz
	Ês / N _{oc} : +4.0dB	0dB	Ês / N _{oc} : +4.0dB
	UTRA Cell 2		UTRA Cell 2
	I _∞ : -80.0dBm/1.28MHz	0dB	l _{oc} : -80.0dBm/1.28MHz
	Î _{or} / I _{oc} : +8.0dB	0dB	Î _{or} / I _{oc} : +8.0dB
	PCCPCH_E _c /I _{or} : -4.77dB	0dB	PCCPCH_E _c /I _{or} : -4.77dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
6.3.6 E-UTRA FDD RRC	Same as 6.3.5	Same as 6.3.5	Same as 6.3.5
connection release redirection			
to UTRA TDD			
6.3.7 E-UTRATDD RRC	Same as 6.3.5	Same as 6.3.5	Same as 6.3.5
connection release redirection			
to UTRA TDD without SI			
provided	Comp. 00 6 2 F	Comp on C 2 F	Comp on 6.2.F
6.3.8 E-UTRA FDD RRC connection release redirection	Same as 6.3.5	Same as 6.3.5	Same as 6.3.5
to UTRA TDD without SI			
provided			
6.3.9 Redirection from E-	Same as 6.3.1	Same as 6.3.1	Same as 6.3.1
UTRAN FDD to UTRAN FDD	Same as 0.3.1	Same as b.s. i	Saille as 0.3.1
without System Information			
6.3.10 Redirection from E-	Same as 6.3.3	Same as 6.3.3	Same as 6.3.3
UTRAN FDD to GER AN when	0.0.0	Carrio do 0.0.0	34.110 40 0.0.0
System Information is not			
provided			
6.3.11 Redirection from E-	Same as 6.3.3	Same as 6.3.3	Same as 6.3.3
UTRAN TDD to GER AN when	Carrie as 6.6.5	<u>oame as 0.5.5</u>	Carrie as 6.6.5
System Information is not			
provided			
6.3.12 E-UTRAN TDD RRC	Same as 6.3.1	Same as 6.3.1	Same as 6.3.1
connection release redirection	<u> </u>	Same as U.S.I	<u> </u>
to UTRAN FDD without SI			
provided			
Provided		<u> </u>	

T 4 4 E 11TD AN EDD 11E	T		T / / // 01 #11 OL DIAN
7.1.1 E-UTRAN FDD - UE	Test 1 (10MHz Ch BW):		Test 1 (10MHz Ch BW):
Transmit Timing Accuracy	Uplink timing: ±12Ts	±3T _s	Uplink timing: ±15T _s
	Max step size T _a : 3.5T _s	+0.5T _s	Max step size T _a : 4T _s
	Min adjust rate: 7Ts	-3.6T _s	Min adjust rate: 3.4Ts
	Max adjust rate: 3.5T _s	+1.1T _s +0.3dB	Max adjust rate: 4.6T _s
	Ês / N _{oc} : +3.00dB		Ês / N∞: +3.30dB
	Test 2 (10MHz Ch BW):	±3T _s	Test 2 (10MHz Ch BW):
	Uplink timing: ±12T _s	+0.3dB	Uplink timing: ±15T _s
	Ês / N _{oc} : +3.00dB	10.002	Ês / N _{oc} : +3.30dB
	Test 3: (1.4MHz Ch BW)	±3T _s	Test 3: (1.4MHz Ch BW)
	Uplink timing: ±24Ts	+0.5T _s	Uplink timing: ±27T _s
	Max step size T _q : 17.5T _s	+1.1T _s +0.3dB	Max step size T _q : 18T _s
	Max adjust rate: 17.5Ts		Max adjust rate: 18.6T _s
	Ês / N∞: +3.00dB		Ês / N _{oc} : +3.30dB
7.1.1_1 E-UTRAN FDD - UE	Test 1 (10MHz Ch B <u>W):</u>		Test 1 (10MHz Ch B <u>W):</u>
Transmit Timing Accuracy	Uplink timing: ±12T _s	±3T _s	Uplink timing: ±15T _s
(Non DRx UE)	Max step size T _q : 3.5T _s	+0.5T _s	Max step size T _q : 4T _s
	Min adjust rate: 7Ts	-3.6T _s +1.1T _s	Min adjust rate: 3.4T _s
	Maxadjust rate: 3.5Ts	+0.3dB	Maxadjust rate: 4.6Ts
	Ês / N _{oc} : +3.00dB		Ês / N₀: +3.30dB
	Toot 2 not applicable		Toot 2 not applicable
	Test 2 not applicable		Test 2 not applicable
	Test 3: (1.4MHz Ch BW)	±3T _s	Test 3: (1.4MHz Ch BW)
	Uplink timing: ±24T _s	+0.5T _s	Uplink timing: ±27Ts
	Max step size T _q : 17.5T _s	+1.1T _s	Max step size T _q : 18T _s
	Maxadjust rate: 17.5Ts	+0.3dB	Maxadjust rate: 18.6T _s
	Ês / N _{oc} : +3.00dB		Ês / N _∞ : +3.30dB
7.1.2 E-UTRAN TDD - UE	Test 1 (10MHz Ch BW):		Test 1 (10MHz Ch BW):
Transmit Timing Accuracy	Uplink timing: (624 ±12) x T _s	±3T _s	Uplink timing: (624 ±15) x Ts
	Max step size T _q : 3.5T _s	+0.5T _s	Max step size T _q : 4T _s
	Min adjust rate: 7Ts	-3.6T _s	Min adjust rate: 3.4T _s
	Max adjust rate: 3.5Ts	+1.1T _s +0.3dB	Maxadjust rate: 4.6T _s
	Ës / N _{oc} : +3.00dB		Ês / N _∞ : +3.30dB
	T+2 (40MH-Ch D)A).	. 2.T	Took 2 (4 ONAL III ON DIAN).
	Test 2 (10MHz Ch BW):	±3T _s	Test 2 (10MHz Ch BW):
	Uplink timing: (624 ±12) x T _s Ês / N _{oc} : +3.00dB	+0.3dB	Uplink timing: (624 ±15) x T _s
	ES / N _{0C} . +3.00db		Ës / N _∞ : +3.30dB
	Test 3: (1.4MHz Ch BW)	±3T _s	Test 3: (1.4MHz Ch BW)
	Uplink timing: (624 ±24) x T _s	+0.5T _s	Uplink timing: (624 ±27) x T _s
	Max step size T _q : 17.5T _s	+1.1T _s +0.3dB	Max step size T _q : 18T _s
	Maxadjust rate: 17.5Ts		Maxadjust rate: 18.6T _s
	Ês / N _{oc} : +3.00dB		Ês / N _{oc} : +3.30dB
7.1.2_1 E-UTRAN TDD - UE	Test 1 (10MHz Ch BW):		Test 1 (10MHz Ch BW):
Transmit Timing Accuracy	Uplink timing: (624 ±12) x Ts	±3T _s	Uplink timing: (624 ±15) x T _s
(Non DRx UE)	Max step size T _q : 3.5T _s	+0.5T _s	Max step size T _q : 4T _s
	Min adjust rate: 7Ts	-3.6T _s	Min adjust rate: 3.4T _s
	Maxadjust rate: 3.5T₅	+1.1T _s	Max adjust rate: 4.6Ts
	Ês / N _{oc} : +3.00dB	+0.3dB	Ês / N _{oc} : +3.30dB
	Test 2 not applicable		Test 2 not applicable
	Test 3: (1.4MHz Ch BW)		Test 3: (1.4MHz Ch BW)
	Uplink timing: (624 ±24) x T _s	±3T _s	Uplink timing: (624 ±27) x T _s
	Max step size T _q : 17.5T _s	+0.5T _s	Max step size T _q : 18T _s
	Max adjust rate: 17.5Ts	+1.1T _s	Max adjust rate: 18.6T _s
7.0.4.5.1150.41.50015	Ês / N _{oc} : +3.00dB	+0.3dB	Ës / N _∞ : +3.30dB
7.2.1 E-UTRAN FDD - UE	Timing Advance Adjustment:	0.5T-	Timing Advance Adjustment:
Timing Advanced Adjustment Accuracy	±4T _s	0.5T _S	±4.5T _s
7.2.2 E-UTRAN TDD - UE	Same as 7.2.2	Same as 7.2.2	Same as 7.2.2
Timing Advance Adjustment	041110 40 7.2.2	Junio do 1.2.2	041110 40 7.2.2
Accuracy			
,			

= 0 4 E LITE *** == ::	Tours ::	To 0 15 (0) :	To . =.
7.3.1 E-UTRAN FDD Radio	SNRs as specified	0.6dB (Subtests	During T1:
Link Monitoring Test for Out-of-		1&2)	Formula: SNR + TT
sync			
*		0.8dB (Subtest 3)	During T2:
		(=====,	Formula: SNR + TT
		0.9dB (Subtest 4)	Tomala. Ortic
		0.9db (Subtest 4)	During TO:
			During T3:
			Formula: SNR - TT
7.3.2 E-UTRAN FDD Radio	SNRs as specified	0.8dB (Subtest 1)	During T1:
Link Monitoring Test for In-sync			Formula: SNR + TT
		0.9dB (Subtest 2)	
		0.002 (000.0012)	During T2:
			Formula: SNR + TT
			Formula. SINK + 11
			During T3:
			Formula: SNR - TT
			During T4:
			Formula: SNR - TT
			Formula. SINK - 11
			During T5:
			Formula: SNR + TT
7.3.3 E-UTRAN TDD Radio	SNRs as specified	Same as 7.3.1	Same as 7.3.1
Link Monitoring Test for Out-of-			
_			
sync	OND 'C I	700	2 700
7.3.4 E-UTRAN TDD Radio	SNRs as specified	Same as 7.3.2	Same as 7.3.2
Link Monitoring Test for In-sync			
7.3.5 E-UTRAN FDD Radio	SNRs as specified	0.9dB	Same as 7.3.1
Link Monitoring Test for Out-of-	·	(Subtest 1)	
sync in DRX		(300001)	
Sylicili Ditx		0.6dB	
		(Subtest 2)	
7.3.6 E-UTRAN FDD Radio	SNRs as specified	0.6dB	Same as 7.3.2
Link Monitoring Test for In-sync			
in DRX			
7.3.7 E-UTRAN TDD Radio	SNRs as specified	0.9dB	Same as 7.3.1
	ONTO do opecifica	(Subtest 1)	Came as 7.5.1
Link Monitoring Test for Out-of-		(Sublest 1)	
sync in DRX			
		0.6dB	
		(Subtest 2)	
7.3.8 E-UTRAN TDD Radio	SNRs as specified	0.6dB	Same as 7.3.2
Link Monitoring Test for In-sync			
. 55%			
IN DRX	D : T4		D : T4
8.1.1 E-UTRAN FDD-FDD intra	During T1:	During T1:	During T1:
frequency event triggered	N _{oc} : -98dBm/15kHz	0dB	N _∞ : -98dBm/15kHz
reporting under fading	Ês ₁ / N _{oc} : +4.00dB	2.10dB	Ês₁/N₀: +6.10dB
propagation conditions in	Ês ₂ / N _{oc} : -infinity	0dB	Ês ₂ / N _{oc} : -infinity
asynchronous cells	,		· · · · · · · · · · · · · · · · · · ·
3	During T2:	During T2:	During T2:
	N _∞ : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
	Ês₁/N₀: +4.00dB	2.10dB	Ês ₁ / N _{oc} : +6.10dB
	Ês ₂ / N _{oc} : +4.00dB	2.10dB	Ês₂/N₀: +6.10dB
8.1.2 E-UTRAN FDD-FDD intra	Same as 8.1.1	Same as 8.1.1	Same as 8.1.1
frequency event triggered		_	
reporting under fading			
propagation conditions in			
synchronous cells			
8.1.3 E-UTRAN FDD-FDD intra	Same as 8.1.1	Same as 8.1.1	Same as 8.1.1
frequency event triggered			
reporting under fading			
propagation conditions in			
synchronous cells with DRX			

8.1.5 E-UTRAN FDD - FDD	During T1:	During T1:	During T1:
Intra-frequency identification of	N _{oc} : -98dBm/15kHz	0dB	N _∞ : -98dBm/15kHz
a new CGI of E-UTRA cell	Ês ₁ / N _{oc} : +8.00dB	0dB	Ês₁/N₀: +8.00dB
using autonomous gaps	Es₂/N _∞ : -infinity	0dB	Es ₂ /N _{oc} : -infinity
	During T2:	During T2:	During T2:
	N _∞ : -98dBm/15kHz	0dB	N _∞ : -98dBm/15kHz
	Ês ₁ / N _{oc} : +8.00dB	0dB	Ês ₁ / N _{oc} : +8.00dB
	Ês ₂ /N _o : +11.00dB	0dB	Ês ₂ /N _{oc} : +11.00dB
	During T3:	During T3:	During T3:
	N _∞ : -98dBm /15kHz	0dB	N _∞ : -98dBm /15kHz
	Ës ₁ / N _{oc} : +8.00dB Ès ₂ / N _{oc} : +11.00dB	0dB 0dB	Ës ₁ / N _{oc} : +8.00dB Ës ₂ / N _{oc} : +11.00dB
8.1.6 E-UTRAN FDD - FDD	Same as 8.1.5	Same as 8.1.5	Same as 8.1.5
Intra-frequency identification of		Came as criss	
a new CGI of E-UTRA cell			
using autonomous gaps with			
DRX			
8.2.1 E-UTRAN TDD-TDD intra	During T1:	During T1:	During T1:
frequency event triggered	N _{oc} : -98dBm/15kHz	0dB	N _∞ : -98dBm/15kHz
reporting under fading	Ês ₁ / N _{oc} : +4.00dB	2.10dB	Ês₁/N∞: +6. 10dB
propagation conditions in	Ês₂/N₀: -infinity	0dB	Ês₂ / N₀: -infinity
synchronous cells	During TO	Description TO	During TO:
	During T2:	Duri <u>ng T2:</u> 0dB	During T2:
	N _∞ : -98dBm/15kHz	2.60dB	N_{∞} : -98dBm/15kHz $\hat{E}s_1/N_{\infty}$: +6.60dB
	Ës ₁ / N _{oc} : +4.00dB	2.60dB	
8.2.2 E-UTRAN TDD-TDD	Ës ₂ / N _{oc} : +4.00dB Same as 8.2.1	Same as 8.2.1	Ês₂/N₀: +6.60dB Same as 8.2.1
intra-frequency event triggered	Same as 0.2.1	Same as 0.2.1	Same as 6.2.1
reporting under fading			
propagation conditions in			
synchronous cells with DRX			
8.2.3 E-UTRAN TDD-TDD	During T1:	During T1:	During T1:
Intra-frequency identification of	N _{oc} : -98dBm/15kHz	0dB	N _{oc} : -98dBm/15kHz
a new CGI of É-UTRA cell	Ês ₁ / N _{oc} : +8.00dB	0dB	Ês ₁ / N _{oc} : +8.00dB
using autonomous gaps	Ês₂/N₀: -infinity	0dB	Ês₂ / N₀: -infinity
	During T2:	During T2:	During T2:
	N_{∞} : -98dBm/15kHz	OdB	N _∞ : -98dBm/15kHz
	Ês ₁ / N _{oc} : +8.00dB	0dB	Ês ₁ / N _{oc} : +8.00dB
	Ês₂/N₀: +11.00dB	0dB	Ês ₂ / N _o : +11.00dB
	During T3:	During T3:	During T3:
	N _{oc} : -98dBm /15kHz	0dB	N _∞ : -98dBm /15kHz
	Ës₁/N₀: +8.00dB	0dB	Ês ₁ /N _o : +8.00dB
0.0.4.5.11TDAN.TDD.TDD	Es ₂ /N _o : +11.00dB	0dB	Es ₂ /N _{oc} : +11.00dB
8.2.4 E-UTRAN TDD-TDD	Same as 8.2.3	Same as 8.2.3	Same as 8.2.3
Intra-frequency identification of a new CGI of E-UTRA cell			
using autonomous gaps with			
DRX			
8.3.1 E-UTRAN FDD-FDD	During T1:	During T1:	During T1:
Inter-frequency event triggered	N _{oc1} : -98dBm/15kHz	0dB	N _{αc1} : -98dBm/15kHz
reporting under fading	Ês ₁ /N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
propagation conditions in	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
asynchronous cells	Ês₂/N _{∞2} : -infinity	0dB	Ês ₂ / N _{oc2} : -infinity
	During T2:	During T2:	During T2:
	N _{∞1} : -98dBm/15kHz	0dB	N _{∞1} : -98dBm/15kHz
	Ës ₁ / N _{oc1} : +4.00dB	0dB	Es ₁ /N _{oc1} : +4.00dB
	N _{oc2} : -98dBm/15kHz Ês ₂ / N _{oc2} : +7.00dB	0dB 0.3dB	N _{oc2} : -98dBm/15kHz Ês ₂ / N _{oc2} : +7.30dB
	L32/ N002. T/ .UUUD	U.3UD	L32/ N002. ∓1.3UUD

8.3.2 E-UTRAN FDD-FDD	Same as 8.3.1	Same as 8.3.1	Sama as 9 2 1
	Same as 8.3.1	Same as 8.3.1	Same as 8.3.1
Inter-frequency event triggered			
reporting when DRX is used			
under fading propagation			
conditions in asynchronous			
cells			
8.3.3 E-UTRAN FDD-FDD Inter	During T1:	During T <u>1:</u>	During T1:
frequency event triggered	N _{oc1} : -98dBm/15kHz	+1.10dB	N _{oc1} : -96.90dBm/15kHz
reporting under AWGN	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
propagation conditions in	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
asynchronous cells with DRX	Ês ₂ / N _{oc2} : +4.00dB	0dB	Ês ₂ / N _{oc2} : +4.00dB
when L3 filtering is used			
innen ze mænnig ie deed	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	+1.10dB	N _{∞1} : -96.90dBm/15kHz
	Ês ₁ / N _{oc1} : +4.00dB	-2.20dB	Ês ₁ / N _{oc1} : +1.80dB
	N ₀₀₂ : -98dBm/15kHz	0dB	N ₀₀₂ : -98dBm/15kHz
		0dB	Ês ₂ / N _{oc2} : +24.00dB
0.2.4.E.LITDAN EDD. EDD.	Ês ₂ / N ₀₀₂ : +24.00dB		
8.3.4 E-UTRAN FDD - FDD	During T1:	During T1:	During T1:
Inter-frequency identification of	N _{∞1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
a new CGI of E-UTRA cell	Ës ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
using autonomous gaps	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : -infinity	0dB	$\hat{E}s_2/N_{\infty 2}$: -infinity
	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês₁/N _{∞1} : +4.00dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : +7.00dB	0dB	Ês ₂ / N _{oc2} : +7.00dB
	002		32. 332
	During T3:	During T3:	During T3:
	N _{oc1} : -98dBm /15kHz	0dB	N _{oc1} : -98dBm /15kHz
	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ /N _{oc2} : +7.00dB	0dB	Ês ₂ / N _{oc2} : +7.00dB
8.3.5 E-UTRAN FDD - FDD	Same as 8.3.4	Same as 8.3.4	Same as 8.3.4
	Same as 6.5.4	Same as 0.3.4	Same as 6.3.4
Inter-frequency identification of			
a new CGI of E-UTRA cell			
using autonomous gaps with			
DRX			
8.4.1 E-UTRAN TDD-TDD	During T1:	During T1:	During T1:
Inter-frequency event triggered	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
reporting under fading	Es ₁ / N _{oc1} : +4.00dB	0dB	Es ₁ / N _{oc1} : +4.00dB
propagation conditions in	N _{0c2} : -98dBm/15kHz	0dB	N _{∞2} : -98dBm/15kHz
synchronous cells	Ês ₂ / N _{oc2} : -infinity	0dB	Ês ₂ / N _{oc2} : -infinity
	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
	Ês ₂ /N _{oc2} : +7.00dB	0.3dB	Ês ₂ / N _{oc2} : +7.30dB
8.4.2 E-UTRAN TDD-TDD	Same as 8.4.1	Same as 8.4.1	Same as 8.4.1
Inter-frequency event triggered			
reporting when DRX is used			
1 . •			
under fading propagation			
conditions in synchronous cells			
8.4.3 E-UTRAN TDD-TDD	Same as 8.3.3	Same as 8.3.3	Same as 8.3.3
inter-frequency event triggered			
reporting under AWGN			
propagation conditions in			
synchronous cells with DRX			
when L3 filtering is used			
	•		

8.4.4 E-UTRAN TDD-TDD	During T1:	During T1:	During T1:
	During T1:	During T1:	During T1:
Inter-frequency identification of	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
a new CGI of E-UTRA cell	Ës ₁ / N _{oc1} : +4.00dB	0dB	Ës ₁ / N _{oc1} : +4.00dB
using autonomous gaps	N _{0c2} : -98dBm/15kHz	0dB	N _{0c2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : -infinity	0dB	Ês₂ / N _{oc2} : -infinity
	-		
	During T2:	During T2:	During T2:
	N _{oc1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz
	Ês ₁ / N _{oc1} : +4.00dB	0dB	Ês ₁ / N _{oc1} : +4.00dB
	N ₀₀₂ : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz
		0dB	•
	Ës₂/N _{∞2} : +7.00dB	UUD	Ës ₂ /N _{oc2} : +7.00dB
	During TO	Description TO	During TO
	During T3:	During T3:	During T3:
	N _{oc1} : -98dBm /15kHz	0dB	N _{oc1} : -98dBm /15kHz
	Ës ₁ / N _{oc1} : +4.00dB	0dB	Ês₁/N _{∞1} : +4.00dB
	N _{0c2} : -98dBm/15kHz	0dB	N _{0c2} : -98dBm/15kHz
	Ês ₂ / N _{oc2} : +7.00dB	0dB	Ês ₂ / N _{oc2} : +7.00dB
8.4.5 E-UTRAN TDD-TDD	Same as 8.4.4	Same as 8.4.4	Same as 8.4.4
Inter-frequency identification of			
a new CGI of E-UTRA cell			
using autonomous gaps with			
DRX			
8.5.1 E-UTRAN FDD - UTRAN	During T4:	During T4:	During T4.
	During T1:	During T1:	During T1:
FDD event triggered reporting	E-UTRA Cell 1		E-UTRA Cell 1
under fading propagation	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
conditions	Es / Noc: +4.00dB	0dB	Es / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -infinity		lor / loc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	9	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4.00dB	0dB	Ês / Noc: +4.00dB
		ООВ	
	UTRA Cell 2	0.15	UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -1.8 dB	0dB	lor / loc: -1.8dB
8.5.2 E-UTRAN FDD - UTRAN	During T1:	During T1:	During T1:
FDD SON ANR cell search	E-UTRA Cell 1		E-UTRA Cell 1
reporting under AWGN	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
propagation conditions	Ês / Noc: 4dB	0dB	Ês / Noc: 4dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -infinity	042	lor / loc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	During 12.	E-UTRA Cell 1
		0.40	
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Es / Noc: 4dB	0dB	Ês / Noc: 4dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -3.35 dB	0.4dB	lor / loc: -2.95dB
8.5.3 E-UTRAN FDD - UTRAN	Same as 8.5.1	Same as 8.5.1	Same as 8.5.1
FDD event triggered reporting			
when DRX is used under			
fading propagation conditions			
pading propagation conditions			

O. F. A. E. LITO AND EDD. LITO AND	ID : #4	ID : #4	ID : T4
8.5.4 E-UTRAN FDD - UTRAN	During T1:	During T1:	During T1:
FDD enhanced cell	E-UTRA Cell 1		E-UTRA Cell 1
identification under AWGN	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
propagation conditions	Ês / Noc: 4dB	0dB	Ês / Noc: 4dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -infinity	CGB	lor / loc: -infinity
	ioi / iociriiiriity		ioi / iociriiiriity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	During 12.	E-UTRA Cell 1
		040	
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 4dB	0dB	Ês / Noc: 4dB
	UTRA Cell 2		UTRA Cell 2
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: 0.02 dB	0dB	lor / loc: 0.02dB
8.6.1 E-UTRAN TDD -UTRAN	Same as 8.5.1	Same as 8.5.1	Same as 8.5.1
FDD event triggered reporting			
under fading propagation			
conditions			
8.7.1 E-UTRAN TDD - UTRAN	During T1:	During T1:	During T1:
TDD event triggered reporting	E-UTRA Cell 1	During 11.	E-UTRA Cell 1
under fading propagation		0dB	
	Noc: -98dBm/15kHz		Noc: -98dBm/15kHz
conditions	Ës / Noc: +9dB	0dB	Ës / Noc: +9dB
	UTRA Cell 2		UTRA Cell 2
	I _{oc} : -80dBm/1.28MHz	0dB	I _∞ : -80dBm/1.28MHz
	I _{or} / I _{oc} : -inf	0dB	I _{or} / I _{oc} : -inf
	PCCPCH_E ₀ /I _{or} : -3dB	0dB	PCCPCH_E _o /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	<u> </u>	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +9dB	0dB	Ês / Noc: +9dB
		ООВ	
	UTRA Cell 2	0.15	UTRA Cell 2
	I _{oc} : -80dBm/1.28MHz	0dB	I _∞ : -80dBm/1.28MHz
	I_{or} / I_{oc} : +5dB	0dB	I _{or} / I _{oc} : +5dB
	PCCPCH_E _o /I _{or} : -3dB	0dB	PCCPCH_E _d /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
8.7.2 E-UTRAN TDD - UTRAN	During T1:	During T1:	During T1:
TDD cell search when DRX is	E-UTRA Cell 1		E-UTRA Cell 1
used under fading propagation	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
conditions	Ês / Noc: +4dB	0dB	Ês / Noc: +4dB
	UTRA Cell 2	1	UTRA Cell 2
	I _∞ : -80dBm/1.28MHz	-0.40dB	I _∞ : -80.40dBm/1.28MHz
	I _{or} / I _{oc} : -inf	0dB	loc: -00.40dBm/1.20m 12
	PCCPCH_E ₀ /I _{or} : -3dB	0dB	PCCPCH_E _c /l _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	During T2:	During T2:	During T2:
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	0.40	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4dB	0dB	Ës / Noc: +4dB
	UTRA Cell 2		UTRA Cell 2
	I _{oc} : -80dBm/1.28MHz	-0.40dB	I _∞ : -80.40dBm/1.28MHz
	I_{or} / I_{oc} : +9dB	0dB	I _{or} / I _{oc} : +9dB
	PCCPCH_E ₀ /I _{or} : -3dB	0dB	PCCPCH_E _c /I _{or} : -3dB
	DwPCH Ec/lor: 0dB	0dB	DwPCH Ec/lor: 0dB
L		1 =	

TDD SON ANR cell search Februrg under AWGN propagation conditions Februrg under AWGN Feb	8.7.3 E-UTRAN TDD - UTRAN	During T1:	During T1:	During T1:
reporting under AWGN Propagation conditions			During 11.	
Propagation conditions			040	
UTRA Cell 2		^		•
	propagation conditions		UUD	
International Content			040	
PCCPCH_Ex/lor: 3dB				
DwPCH_Ec/lor: 0dB				
During T2: E-UTRA Cell 1 Noc:-98dBm/15kHz Es UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 UTRA Cell 2 Us:-75dBm/1.28MHz UTRA Cell 2 Us:-75dBm/1.28MHz UTRA Cell 2 Us:-75dBm/1.28MHz Us:-55dBm/1.28MHz Us:-55d				
E-UTRA Cell 1 Not::-98dBm/15kHz DdB Not::-98dBm/15kHz Es / Not: +4dB UTRA Cell 2 UTRA Cell 2 Utra / Sci +5dB OdB Utra / Sci +5dB OdB Utra / Sci +3dB OdB Utra / Sci +3dB OdB OdB Utra / Sci +3dB OdB Od		DWPCH_Ec/lor: 0aB	oab	DWPCH_Ec/lor: 0aB
Noc:-98dBm/15kHz			During T2:	
\$\frac{\bar{\text{E}}{\text{S}} \ Noc: 44dB \ \ \text{UTRA Cell 2} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		E-UTRA Cell 1		E-UTRA Cell 1
UTRA Cell 2				Noc: -98dBm/15kHz
I _{Ioc.} :-75dBm/1.28MHz I _{Ioc.} :-10c.:-10finity I _{Ioc.} :-10finity	Ës / Noc: +4dB	0dB	Ës / Noc: +4dB	
		UTRA Cell 2		UTRA Cell 2
PCCPCH_Ec/lor: 0dB DwPCH_Ec/lor: 0dB Dw		I₀: -75dBm/1.28MHz	0dB	I _∞ : -75dBm/1.28MHz
DwPCH_Ec/lor: 0dB DwPCH_Ec/lor: 0dB During T1: During T1: E-UTRA Cell 1 Noc: -98dBm/15kHz During T2: During T3 E-UTRA Cell 2 Noc: -44dB UTRA Cell 2 Noc: -47.7dB Noc: -98dBm/1.28MHz Noc: -98dBm/1.5kHz E-UTRA Cell 1 Noc: -98dBm/1.5kHz E-UTRA Cell 2 Noc: -44dB UTRA Cell 2 Noc: -44dB UTRA Cell 2 Noc: -98dBm/1.5kHz Es / Noc: +4dB UTRA Cell 2 Noc: -98dBm/1.28MHz Noc: -98dBm/		I _{or} / I _{oc} : +5dB	0dB	I _{or} / I _{oc} : +5dB
B.7.4 E-UTRAN TDD - UTRAN During T1: E-UTRA Cell 1 E-UTRA Cell 2 Ioc: -98dBm/15kHz		PCCPCH_E _o /I _{or} : -3dB	0dB	PCCPCH_E _o /I _{or} : -3dB
TDD enhanced cell identification under AWGN propagation conditions E-UTRA Cell 1 Noc:-98dBm/15kHz Es / Noc: 44dB UTRA Cell 2 loc:-80dBm/1.28MHz Hor/loc: - infinity OdB UTRA Cell 2 loc:-80dBm/1.28MHz Hor/loc: - infinity OdB DwPCH_Ec/lor: -4.77dB OdB DwPCH_Ec/lor: 0dB OdB		DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
Identification under AWGN Propagation conditions Noc: +98dBm/15kHz És / Noc: +4dB UTRA Cell 2 Ioc: -80dBm/1 -28MHz Ho.6dB Ioc: -79.4dBm/1.28MHz Ior / Ioc: - infinity PCCPCH_Ec/Ior: -4.77dB OdB Ior / Ioc: - infinity PCCPCH_Ec/Ior: -4.77dB OdB DwPCH_Ec/Ior: 0dB OdB Es / Noc: +4dB UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: +4dB UTRA Cell 2 Ior: -80dBm/1.28MHz OdB Ior / Ioc: +8dB			During T1:	
Dropagation conditions				
UTRA Cell 2 loc: -80dBm/1.28MHz lor / loc: -infinity OdB loc: -79.4dBm/1.28MHz lor / loc: -infinity PCCPCH_Ec/lor: -4.77dB OdB DwPCH_Ec/lor: 0dB Noc: -98dBm/15kHz E-UTRA Cell 1 Noc: -98dBm/1.28MHz lor / loc: +8dB UTRA Cell 2 loc: -80dBm/1.28MHz lor / loc: +8dB PCCPCH_Ec/lor: -4.77dB OdB DwPCH_Ec/lor: 0dB		A		
loc: -80dBm/1.28MHz r/ loc: - infinity loc	propagation conditions		0dB	
Ior / Ioc: - infinity				
PCCPCH_Ec/lor: -4.77dB DdB DdB DWPCH_Ec/lor: -4.77dB DwPCH_Ec/lor: 0dB Noc: -98dBm/15kHz Ês / Noc: +4dB UTRA Cell 2 UTRA Cell 3 UTRA Cell 4 UTRA Cell 5 UTRA Cell 6 UTRA Cell 6 UTRA Cell 7 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 4 UTRA Cell 6 UTRA Cell 6 UTRA Cell 1 UTRA Cell 1 UTRA Cell 1 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 2 UTRA Cell 1 UTRA Cell 3 UTRA Cell 4 UTRA Cell 4 UTRA Cell 4 UTRA Cell 5 UTRA Cell 6 UTRA Cell				
DwPCH_Ēc/lor: 0dB		lor / loc: - infinity		
During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz E-UTRA Cell 1 Noc: -98dBm/15kHz Es / Noc: +4dB UTRA Cell 2 Ioc: -80dBm/1.28MHz Ho.6dB UTRA Cell 2 Ioc: -80dBm/1.28MHz Ho.6dB Ior / Ioc: +8dB Ior / Ioc: +8dB PCCPCH_Ec/Ior: -4.77dB OdB DwPCH_Ec/Ior: -4.77dB OdB			0dB	
E-UTRA Cell 1 Noc: -98dBm/15kHz		DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
E-UTRA Cell 1 Noc: -98dBm/15kHz		During T2:	During T2:	During T2:
Noc: -98dBm/15kHz			During 12.	
Es / Noc: +4dB UTRA Cell 2 loc: -80dBm/1.28MHz lor / loc: +8dB UTRA Cell 2 loc: -80dBm/1.28MHz lor / loc: +8dB lor / lor / loc: +8dB lor / loc: +4dB lor / loc: +8dB lor / loc: +4dB lor / loc: +8dB loc: +8dB lor / loc: +8dB loc: +8dB loc: +8dB loc: +8dB loc: +8dB			0dB	
UTRA Cell 2 loc: -80dBm/1.28MHz lor / loc: +8dB loc / -79.4dBm/1.28MHz lor / loc: +8dB loc / -79.4dBm/1.28MHz lor / loc: +8dB loc / -79.4dBm/1.28MHz loc / -79.4dBm/1.5kHz loc / -98.4dBm/1.5kHz loc / -9				
loc: -80dBm/1.28MHz			OGB	
Ior / Ioc: +8dB			+0.6dB	
PCCPCH_Ec/lor: -4.77dB				
DwPCH_Ec/lor: 0dB				
8.8.1 E-UTRAN FDD - GSM event triggered reporting in AWGN During T1: E-UTRA Cell 1				
E-UTRA Cell 1	8 8 1 F-LITPAN FDD - GSM			
AWGN Noc: -98dBm/15kHz 0dB Noc: -98dBm/15kHz Ês / Noc: +4dB 0dB Ês / Noc: +4dB GSM Cell 2 Signal level: -infinity OdB Signal level: -infinity During T2: During T2: E-UTRA Cell 1 Noc: -98dBm/15kHz 0dB Noc: -98dBm/15kHz Ês / Noc: +4dB 0dB Ês / Noc: +4dB GSM Cell 2 Signal level: -75 dBm OdB Signal level: -75 dBm 8.8.2 E-UTRAN FDD- GSM event triggered reporting when DRX is used in AWGN During T1: During T1: E-UTRAN Cell 1 N∞: -98dBm/15kHz 0dB N∞: -98dBm/15kHz Es / N∞: +4.00dB GSM Cell 2 GSM Cell 2 Signal level: -75 dBm			Duning 11.	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			0dB	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	AVOIN			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			OUD	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			OAB	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		Signal levelillillity	oub	Signal level Illillity
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			During T2:	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			I .	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			0dB	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
event triggered reporting when DRX is used in AWGN E-UTRA Cell 1 N _{oc:} -98dBm/15kHz Ês / N _{oc:} +4.00dB GSM Cell 2 E-UTRAN Cell 1 N _{oc:} -98dBm/15kHz OdB Residue (CSM Cell 2) E-UTRAN Cell 1 N _{oc:} -98dBm/15kHz OdB GSM Cell 2				
DRX is used in AWGN N _∞ : -98dBm/15kHz 0dB N _∞ : -98dBm/15kHz Ês / N _∞ : +4.00dB 0dB Ês / N _∞ : +4.00dB GSM Cell 2 GSM Cell 2			During T1:	
Ês / N _∞ : +4.00dB			04B	
GSM Cell 2 GSM Cell 2	DIVI IS RECI III AVVGIN		I .	_ ==
			UUD	
Tolgrise to the property of th			0dB	
		3 2		3 = 12 12 11 11 11 11 11 11 11 11 11 11 11
During T2: During T2: During T2:			During T2:	
E-UTRA Cell 1				
N_{∞} : -98dBm/15kHz		· · ·	I .	• -
$ \hat{E}_S /N_{oc}$: +4.00dB $ \hat{E}_S /N_{oc}$: +4.00dB			0dB	
GSM Cell 2 GSM Cell 2				
Signal level: -75dBm OdB Signal level: -75dBm		Signal level: -75dBm	naR	Signal level: -75dBm

8.9.1 E-UTRAN FDD - UTRAN	During T1:	During T1:	During T1:
TDD event triggered reporting	E-UTRA Cell 1	During 11.	E-UTRA Cell 1
under fading propagation	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
conditions	lÊs / lot: 4dB	0dB	lÊs / lot: 4dB
COTTOTIONS	UTRA Cell 2	OGB	UTRA Cell 2
	loc: -70dBm/1.28MHz	0dB	loc: -70dBm/1.28MHz
	lor / loc: -infinity	OUD	lor / loc: -infinity
	ior / iocirillinity		ior / iocirilitity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	9	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / lot: 4dB	0dB	Ês / lot: 4dB
	UTRA Cell 2	042	UTRA Cell 2
	loc: -70dBm/1.28MHz	0dB	loc: -70dBm/1.28MHz
	lor / loc: 9 dB	0 dB	lor / loc: 9 dB
8.9.2 E-UTRAN FDD - UTRAN	Same as 8.7.4	Same as 8.7.4	Same as 8.7.4
	Same as 6.7.4	Same as 0.7.4	Same as 6.7.4
TDD enhanced cell identification under AWGN			
propagation conditions	Cama as 0.0.1	Comp. co 0.04	Comp. co. 0.0.4
8.10.1 E-UTRAN TDD - GSM	Same as 8.8.1	Same as 8.8.1	Same as 8.8.1
event triggered reporting in			
AWGN			
8.10.2 E-UTRAN TDD-GSM	Same as 8.8.2	Same as 8.8.2	Same as 8.8.2
event triggered reporting when			
DRX is used in AWGN			
8.11.1 Multiple E-UTRAN FDD-	During T1:	During T1:	During T1:
FDD Inter-frequency event	E-UTRA Cell 1		E-UTRA Cell 1
triggered reporting under	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
fading propagation conditions	Ês / Noc: 0dB	0dB	Ës / Noc: 0dB
	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Es / Noc: -infinity	0dB	Es / Noc: -infinity
	E-UTRA Cell 3		E-UTRA Cell 3
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: -infinity	0dB	Ês / Noc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 3dB	0dB	Ês / Noc: 3dB
	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 3dB	+0.2dB	Ês / Noc: 3.2dB
	E-UTRA Cell 3		E-UTRA Cell 3
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: 3dB	+0.2dB	Ês / Noc: 3.2dB
8.11.2 E-UTRAN TDD - E-	Same as 8.11.1	Same as 8.11.1	Same as 8.11.1
UTRAN TDD and E-UTRAN			
TDD Inter-frequency event			
triggered reporting under			
fading propagation conditions			
01 1 0 12 22 2 2 2 2 2	1	I.	

8.11.3 E-UTRAN FDD-FDD	During T1:	During T1:	During T1:
	E-UTRA Cell 1	During 11.	E-UTRA Cell 1
Inter-frequency and UTRAN FDD event triggered reporting	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
under fading propagation	Ês / Noc: +4.00dB	-0.8dB	Ês / Noc: +3.20dB
conditions	E-UTRA Cell 2	-0.0db	E-UTRA Cell 2
COTTOTIONS	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: -infinity	0dB	Ês / Noc: -infinity
	UTRA Cell 3	ОСВ	UTRA Cell 3
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
		0dB	
	lor / loc: -infinity	UUB	lor / loc: -infinity
	During T2:	During T2:	During T2:
	E-UTRA Cell 1	During 12.	E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4.00dB	-0.8dB	Ês / Noc: +3.20dB
	E-UTRA Cell 2	-0.0UD	E-UTRA Cell 2
		040	
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ës / Noc: +7.00dB	0dB	Ës / Noc: +7.00dB
	UTRA Cell 3	0.15	UTRA Cell 3
	loc: -70dBm/3.84MHz	0dB	loc: -70dBm/3.84MHz
	lor / loc: -1.8 dB	0dB	lor / loc: -1.8 dB
8.11.4 InterRAT E-UTRATDD	During T1:	During T1:	During T1:
to E-UTRA TDD and UTRA	E-UTRA Cell 1	0.15	E-UTRA Cell 1
TDD cell search	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ës / Noc: +4.00dB	-0.8dB	Ës / Noc: +3.20dB
	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: -infinity	0dB	Ês / Noc: -infinity
	UTRA Cell 3		UTRA Cell 3
	I₀: -80dBm/1.28MHz	-0.4dB	I _∞ : -80.4dBm/1.28MHz
	l _{or} / l _{oc} : -infinity	0dB	l _{or} / l _{oc} : -infinity
	PCCPCH_E _c /I _{or} : -3dB	0dB	PCCPCH_E ₀ /I _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4.00dB	-0.8dB	Ês / Noc: +3.20dB
	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +7.00dB	0dB	Ês / Noc: +7.00dB
	UTRA Cell 3		UTRA Cell 3
	l _{oc} : -80dBm/1.28MHz	-0.4dB	I _{oc} : -80.4dBm/1.28MHz
	I _{or} / I _{oc} : 9.00dB	0dB	I _{or} / I _{oc} : 9.00dB
	PCCPCH_E ₀ /I _{or} : -3dB	0dB	PCCPCH_E ₀ /l _{or} : -3dB
	DwPCH_Ec/lor: 0dB	0dB	DwPCH_Ec/lor: 0dB
8.11.5 Combined E-UTRAN	During T1:	During T1:	During T1:
FDD - E-UTRA FDD and GSM	E-UTRA Cell 1		E-UTRA Cell 1
cell search. E-UTRA cells in	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
fading; GSM cell in static	Ês / Noc: +4.00dB	-0.2dB	Ês / Noc: +3.80dB
propagation conditions	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: -infinity	0dB	Ês / Noc: -infinity
	GSM Cell 3		GSM Cell 3
	Signal level: -infinity	0dB	Signal level: -infinity
	,		
	During T2:	During T2:	During T2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +4.00dB	-0.2dB	Ês / Noc: +3.80dB
	E-UTRA Cell 2		E-UTRA Cell 2
	Noc: -98dBm/15kHz	0dB	Noc: -98dBm/15kHz
	Ês / Noc: +7.00dB	+0.5dB	Ês / Noc: +7.50dB
	GSM Cell 3	3.5.5.	GSM Cell 3
	Signal level: -75dBm	0dB	Signal level: -75dBm
	10.ga. 10 toll 1 0 a bill	1000	Jo.g. ar 101011 1 Jubili

8.11.6 Combined E-UTRAN	Same as 8.11.5	Same as 8.11.5	Same as 8.11.5
TDD - E-UTRA TDD and GSM			
cell search. E-UTRA cells in			
fading; GSM cell in static			
propagation conditions			
8.14.1 E-UTRAN TDD-FDD	Same as 8.3.1	Same as 8.3.1	Same as 8.3.1
	Same as 6.3.1	Same as o.s. i	Same as 6.3.1
Inter-frequency event triggered			
reporting under fading			
propagation conditions in			
asynchronous cells			
8.14.2 E-UTRAN TDD-FDD	Same as 8.3.1	Same as 8.3.1	Same as 8.3.1
Inter-frequency event triggered			
reporting when DRX is used			
under fading propagation			
conditions in asynchronous			
cells			
8.14.3 E-UTRAN TDD - FDD	Same as 8.4.4	Same as 8.4.4	Same as 8.4.4
Inter-frequency identification of	Game as o.+.+	Carrie as o.+.+	Odine 43 0.4.4
a new CGI of E-UTRA cell			
using autonomous gaps		0 0 1 1	
8.15.1 E-UTRAN FDD-TDD	Same as 8.4.1	Same as 8.4.1	Same as 8.4.1
Inter-frequency event triggered			
reporting under fading			
propagation conditions in			
asynchronous cells			
8.15.2 E-UTRAN FDD-TDD	Same as 8.4.1	Same as 8.4.1	Same as 8.4.1
Inter-frequency event triggered			
reporting when DRX is used			
under fading propagation			
conditions in asynchronous			
cells			
8.15.3 E-UTRAN FDD - TDD	Same as 8.4.4	Same as 8.4.4	Same as 8.4.4
Inter-frequency identification of			
a new CGI of E-UTRA cell			
using autonomous gaps			
O 4C 4 F LITDAN FDD avact	D		D
8.16.1 E-UTRAN FDD event	During T1:	During T1:	During 11:
triggered reporting under	E-UTRA Cell 1	During T1:	During T1: E-UTRA Cell 1
	E-UTRA Cell 1	During T1: 0dB	E-UTRA Cell 1
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz	0dB	E-UTRA Cell 1 N _{∞1} : -101dBm/15kHz
triggered reporting under	E-UTŘA Cell 1 N _{∞1} : -101dBm/15kHz Ês ₁ / N _{∞1} : 19dB		E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Es ₁ / N _{oc1} : 19.2dB
triggered reporting under	E-UTŘA Cell 1 N _{cc1} : -101dBm/15kHz Ês ₁ / N _{cc1} : 19dB E-UTRA Cell 2	0dB +0.2dB	E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{E}s_1/N_{\infty 1}$: 19.2dB E-UTRA Cell 2
triggered reporting under	E-UTŘA Cell 1 N _{∞1} : -101dBm/15kHz Ês ₁ / N _{∞1} : 19dB E-UTRA Cell 2 N _{∞2} : -101dBm/15kHz	0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz \hat{E} s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz
triggered reporting under	E-UTŘA Cell 1 N_{cc1} : -101dBm/15kHz $\hat{E}s_1/N_{cc1}$: 19dB E-UTRA Cell 2 N_{cc2} : -101dBm/15kHz $\hat{E}s_2/N_{cc2}$: 19dB	0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{E}s_1/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19.2dB
triggered reporting under	E-UTŘA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{E}s_1/N_{\infty 1}$: 19dB E-UTRA Cell 2 $N_{\infty 2}$: -101dBm/15kHz $\hat{E}s_2/N_{\infty 2}$: 19dB E-UTRA Cell 3	0dB +0.2dB 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\dot{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\dot{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3
triggered reporting under	E-UTŘA Cell 1 N_{cc1} : -101dBm/15kHz $\hat{E}s_1/N_{cc1}$: 19dB E-UTRA Cell 2 N_{cc2} : -101dBm/15kHz $\hat{E}s_2/N_{cc2}$: 19dB	0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{E}s_1/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19.2dB
triggered reporting under	E-UTŘA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{E}s_1/N_{oc1}$: 19dB E-UTŘA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19dB E-UTŘA Cell 3 $\hat{E}s_3/N_{oc2}$: -infinity	0dB +0.2dB 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}s_1/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}s_2/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}s_3/N_{oc2}$: -infinity
triggered reporting under	E-UTŘA Cell 1 N _{∞1} : -101dBm/15kHz Ês ₁ / N _{∞1} : 19dB E-UTRA Cell 2 N _{∞2} : -101dBm/15kHz Ês ₂ / N _{∞2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{∞2} : -infinity <u>During T2:</u>	0dB +0.2dB 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity
triggered reporting under	E-UTŘA Cell 1 N _{o:1} : -101dBm/15kHz Ês ₁ / N _{o:1} : 19dB E-UTRA Cell 2 N _{o:2} : -101dBm/15kHz Ês ₂ / N _{o:2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{o:2} : -infinity <u>During T2:</u> E-UTRA Cell 1	0dB +0.2dB 0dB +0.2dB 0dB <u>During T2:</u>	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity <u>During T2:</u> E-UTRA Cell 1
triggered reporting under	E-UTRA Cell 1 N _{oo1} : -101dBm/15kHz Ês ₁ / N _{oo1} : 19dB E-UTRA Cell 2 N _{oo2} : -101dBm/15kHz Ês ₂ / N _{oo2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oo2} : -infinity During T2: E-UTRA Cell 1 N _{oo1} : -101dBm/15kHz	0dB +0.2dB 0dB +0.2dB 0dB During T2:	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity $\frac{During\ T2}{\mathbb{E}}$ E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz
triggered reporting under	E-UTŘA Cell 1 N _{o:1} : -101dBm/15kHz Ês ₁ / N _{o:1} : 19dB E-UTRA Cell 2 N _{o:2} : -101dBm/15kHz Ês ₂ / N _{o:2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{o:2} : -infinity <u>During T2:</u> E-UTRA Cell 1	0dB +0.2dB 0dB +0.2dB 0dB <u>During T2:</u>	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity <u>During T2:</u> E-UTRA Cell 1
triggered reporting under	E-UTRA Cell 1 N _{oo1} : -101dBm/15kHz Ês ₁ / N _{oo1} : 19dB E-UTRA Cell 2 N _{oo2} : -101dBm/15kHz Ês ₂ / N _{oo2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oo2} : -infinity During T2: E-UTRA Cell 1 N _{oo1} : -101dBm/15kHz	0dB +0.2dB 0dB +0.2dB 0dB During T2:	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity $\frac{During\ T2}{\mathbb{E}}$ E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2	0dB +0.2dB 0dB +0.2dB 0dB During T2:	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{oc2}$: -infinity $\frac{\text{During T2:}}{\text{E-UTRA Cell 1}}$ N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{oc1}$: 19.2dB E-UTRA Cell 2
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{oc2}$: -infinity $\frac{\text{During T2:}}{\text{E-UTRA Cell 1}}$ N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz
triggered reporting under	E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19dB E-UTRA Cell 3 $\hat{E}s_3/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_1/N_{oc2}$: 19dB	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc2} : 19.2dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc2} : 19.2dB E-UTRA Cell 3
triggered reporting under	E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19dB E-UTRA Cell 3 $\hat{E}s_3/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_1/N_{oc2}$: 19dB	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc2} : 19.2dB
triggered reporting under	E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_2/N_{oc2}$: 19dB E-UTRA Cell 3 $\hat{E}s_3/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oct} : -101dBm/15kHz $\hat{E}s_1/N_{oct}$: 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{E}s_1/N_{oc2}$: 19dB E-UTRA Cell 3 $\hat{E}s_2/N_{oc2}$: 19dB E-UTRA Cell 3 $\hat{E}s_3/N_{oc2}$: 19dB	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3:	0dB +0.2dB 0dB +0.2dB 0dB During T2: 0dB +0.2dB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : 19.0dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc1} : 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}$ s ₁ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₂ / N_{oc2} : 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}$ s ₃ / N_{oc2} : 19.0dB During T3: E-UTRA Cell 1
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3:	E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{\infty 1}$: 19.2dB E-UTRA Cell 2 $N_{\infty 2}$: -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: -infinity During T2: E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{\infty 1}$: 19.2dB E-UTRA Cell 2 $N_{\infty 2}$: -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: 19.0dB During T3: E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc2} : -3dB	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -3.0dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3:	E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{\infty 1}$: 19.2dB E-UTRA Cell 2 $N_{\infty 2}$: -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: -infinity During T2: E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz $\hat{\mathbb{E}}_{51}/N_{\infty 1}$: 19.2dB E-UTRA Cell 2 $N_{\infty 2}$: -101dBm/15kHz $\hat{\mathbb{E}}_{52}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{53}/N_{\infty 2}$: 19.0dB During T3: E-UTRA Cell 1 $N_{\infty 1}$: -101dBm/15kHz
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc2} : -3dB	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3:	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -3.0dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc2} : -3dB E-UTRA Cell 2	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -3.0dB E-UTRA Cell 2
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₂ / N _{oc2} : -10dB During T3: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : -3dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB
triggered reporting under	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₂ / N _{oc2} : -3dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₁ / N _{oc1} : -3dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : -3dB E-UTRA Cell 3	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3
triggered reporting under deactivated SCell in non-DRX	E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : 19dB E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : -3dB E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : -3dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : -3dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -3dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -3dB	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB OdB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -3.0dB
triggered reporting under deactivated SCell in non-DRX 8.16.2 E-UTRAN TDD event	E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : -infinity During T2: E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₁ / N _{oc1} : 19dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 3 Ês ₃ / N _{oc2} : 19dB E-UTRA Cell 1 N _{oc1} : -101dBm/15kHz Ês ₂ / N _{oc2} : -3dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₁ / N _{oc1} : -3dB E-UTRA Cell 2 N _{oc2} : -101dBm/15kHz Ês ₂ / N _{oc2} : -3dB E-UTRA Cell 3	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3
triggered reporting under deactivated SCell in non-DRX	E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -infinity During T2: E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : 19dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : 19dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : 19dB E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : -3dB E-UTRA Cell 1 N_{oct} : -101dBm/15kHz \hat{E}_{s_1}/N_{oct} : -3dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz \hat{E}_{s_2}/N_{oc2} : -3dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -3dB E-UTRA Cell 3 \hat{E}_{s_3}/N_{oc2} : -3dB	OdB +0.2dB OdB +0.2dB OdB During T2: OdB +0.2dB OdB +0.2dB OdB During T3: OdB OdB OdB	E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -infinity During T2: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc1}$: 19.2dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: 19.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: 19.0dB During T3: E-UTRA Cell 1 N_{oc1} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.0dB E-UTRA Cell 2 N_{oc2} : -101dBm/15kHz $\hat{\mathbb{E}}_{s_1}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_2}/N_{oc2}$: -3.2dB E-UTRA Cell 3 $\hat{\mathbb{E}}_{s_3}/N_{oc2}$: -3.0dB

8.16.3 E-UTRAN FDD-FDD	During T1:	During T1:	During T1:	
Event triggered reporting on	E-UTRA Cell 1		E-UTRA Cell 1	
deactivated SCell with PCell	N _{∞1} : -98dBm/15kHz	0dB	N _{∞1} : -98dBm/15kHz	
interruption in non-DRX	Ês ₁ / N _{oc1} : 16dB	0dB	Ês ₁ / N _{oc1} : 16dB	
·	E-UTRA Cell 2		E-UTRA Cell 2	
	N ₀₀₂ : -98dBm/15kHz	0dB	N _{0c2} : -98dBm/15kHz	
	Ês ₂ / N _{oc2} : 16dB	0dB	Ês ₂ / N _{oc2} : 16dB	
	E-UTRA Cell 3		E-UTRA Cell 3	
	Ês ₃ / N _{oc2} : -infinity	0dB	Ês ₃ / N _{oc2} : -infinity	
	,		,	
	During T2:	During T2:	During T2:	
	E-UTRA Cell 1		E-UTRA Cell 1	
	N _{∞1} : -98dBm/15kHz	0dB	N _{oc1} : -98dBm/15kHz	
	Ês ₁ / N _{oc1} : 16dB	0dB	Ês ₁ / N _{oc1} : 16dB	
	E-UTRA Cell 2		E-UTRA Cell 2	
	N _{oc2} : -98dBm/15kHz	0dB	N _{oc2} : -98dBm/15kHz	
	Ês ₂ / N _{oc2} : 16dB	0dB	Ês ₂ / N _{oc2} : 16dB	
	E-UTRA Cell 3		E-UTRA Cell 3	
	Ês ₃ / N _{oc2} : 16dB	0dB	Ês ₃ / N _{oc2} : 16dB	
8.16.4 E-UTRAN TDD-TDD	Same as 8.16.3	Same as 8.16.3	Same as 8.16.3	
Event triggered reporting on				
deactivated SCell with PCell				
interruption in non-DRX				
9.1.1.1 FDD Intra Frequency	Test 1:	Test 1:	Test 1:	
Absolute RSRP Accuracy	N _∞ : -106dBm/15kHz	-1.0dB	N _{oc} : -107.0dBm/15kHz	
	Ês₁/N₀: +6.0dB	0dB	Ês ₁ / N _{oc} : +6.0dB	
	Ês ₂ / N _{oc} : +1.0dB	+1.0dB	Ês ₂ / N _{oc} : +2.0dB	
	Reported RSRP values: ±6dB	Via mapping	RSRP_29 to RSRP_43	
	Test 2:	Tes <u>t 2:</u>	Test 2:	
	N _∞ : -88dBm/15kHz	0dB	N _{oc} : -88dBm/15kHz	
	Es ₁ / N _{oc} : +6.0dB	0dB	Es ₁ / N _{oc} : +6.0dB	
	Ês₂/N₀c: +1.0dB	+1.0dB	Ês₂/N₀: +2.0dB	
	Reported RSRP values: ±8dB	Via mapping	RSRP_45 to RSRP_64	
	Test 3:	Test 3:	Test 3:	
	N _∞ : -116dBm to -112.5dBm	0dB	N _∞ : -116dBm to -112.5dBm	
	/15kHz depending on operating	OGB	/15kHz depending on operating	
	band		band	
	Ês₁/N∞: +3.0dB	0dB	Ês₁/N₀: +3.0dB	
	Ês ₂ / N _o : -1.0dB	+0.8dB	Ês₂/N₀: -0.2dB	
	Reported RSRP values: ±6dB	Via mapping	RSRP_17 to RSRP_32	
	TOPORCO NOIN VAIACO. ±00D	via mapping	RSRP_18 to RSRP_33	
			RSRP_19 to RSRP_34	
			RSRP_20 to RSRP_35	
			depending on operating band	
	The derivation of the RSRP values	takes into account the		
	from N_{oc} and \hat{E}_{S_2}/N_{oc} , the allowed			
	function.		6dema	
	The RSRP values given above are for normal conditions. In all cases the RSRP values			
	are 3dB wider at each end for extre			
are out when at each one of externe conditions.				

9.1.1.2 FDD Intra Frequency	Test 1:	Test 1:	Test 1:
Relative RSRP Accuracy	N _∞ : -106dBm/15kHz	0 dB	N _{oc} : -106 dBm/15kHz
Relative Rorri Accuracy	Ês₁/N₀: +6.0dB	0 dB	Ês ₁ / N _{oc} : +6.0dB
	Ês ₂ / N _∞ : +1.0dB	+1.0dB	Ês ₂ / N _{oc} : +2.0dB
	Reported relative RSRP	Via mapping	RSRP_x-9 to RSRP_x+1
	values:_±3dB	via iliappilig	K3KF_X-9 10 K3KF_X+1
	values±3ub		
	Test 2:	Tes <u>t 2:</u>	Test 2:
	N _{oc} : -88dBm/15kHz	0dB	N _∞ : -88dBm/15kHz
	Ês ₁ / N _{oc} : +6.0dB	0dB	Ês ₁ / N _{oc} : +6.0dB
	Ês ₂ / N _{oc} : +1.0dB	+1.0dB	Ês ₂ /N _o : +2.0dB
	Reported relative RSRP	Via mapping	RSRP_x-9 to RSRP_x+1
	values: ±3dB	via mapping	10101 _X-3 to 100101 _X+1
	varacs±5aB		
	Test 3:	Test 3:	Test 3:
	N _{oc} : -116dBm to -112.5dBm	0dB	N_{∞} : -116dBm to -
	/15kHz depending on		112.5dBm /15kHz
	operating band		depending on operating
			band
	Ês ₁ / N _{oc} : +3.0dB	0dB	$\hat{E}s_1/N_{\infty}$: +3.0dB
	Ês ₂ / N _{oc} : -1.0dB	+1.0dB	Ês₂/N₀c: 0dB
	Reported relative RSRP	Via mapping	RSRP_x-8 to RSRP_x+2
	values:_±3dB		
			he uncertainty in Cell 1 and Cell
	2 RSRP from N _∞ , Ês ₁ / N _∞ and	$ Es_2/N_{oc} $, the allowed U	JE reporting accuracy, and the
	UE mapping function.		
	The RSRP values given above	are for both normal and	
9.1.2.1 TDD Intra Frequency	Same as 9.1.1.1	Same as 9.1.1.1	Same as 9.1.1.1
Absolute RSRP Accuracy			
9.1.2.2 TDD Intra Frequency	Same as 9.1.1.2	Same as 9.1.1.2	Same as 9.1.1.2
Relative RSRP Accuracy			
9.1.3.1 FDD Inter Frequency	Test 1:	Test 1:	<u>Test 1:</u>
Absolute RSRP Accuracy	N _{∞1} : -88.65dBm/15kHz	-0.6dB	N _{∞1} : -89.25dBm/15kHz
	Es ₁ / N _{oc1} : +10.00dB	0dB	Es ₁ / N _{oc1} : +10.00dB
	N _{0c2} : -88.65dBm/15kHz	-0.6dB	N _{0c2} : -89.25dBm/15kHz
	Ês ₂ / N _{oc2} : +10.00dB	0dB	Ês ₂ / N _{oc2} : +10.00dB
	Reported RSRP values: ±8dB	Via mapping	RSRP_52 to RSRP_71
	Took 2.	Toot Or	Took 2.
	Test 2:	Test 2:	Test 2:
	N _{∞1} : (N _{∞2} +8dB)	0dB	N _{oc1} : (N _{oc2} +8dB)
	Es ₁ / N _{oc1} : +13.00dB	0dB 0dB	Es ₁ / N _{oc1} : +13.00dB
	N _{oc2} : -117dBm to -113.5dBm		N _{oc2} : -117dBm to -113.5dBm
	/15kHz depending on operating		/15kHz depending on operating
	band	0.0-10	band Ê- (N 2.00-IP
	Ës₂/N₀₂: -4.00dB	0.8dB	Ês₂/N₀c: -3.20dB
	Reported RSRP values: ±6dB	Via mapping	RSRP_13 to RSRP_28
			RSRP_14 to RSRP_29
			RSRP_15 to RSRP_30
			RSRP_16 to RSRP_31
	The derivation of the DCDD	upo tokoo into pagawat ti	depending on operating band
	The derivation of the RSRP value from N = and Ês = /N = the all		
	from N _{0c2} and Ês ₂ / N _{0c2} , the allo	owed o⊏ reporting accu	nacy, and the ∪⊏ mapping
	function.	ara far namal aaadii:aa	a In all aggress the DCDD values
			s. In all cases the RSRP values
	are 3dB wider at each end for e	xueme conditions.	

9.1.3.2 FDD Inter Frequency	Test 1:	Test 1:	Test 1:
Relative RSRP Accuracy	N _{oc1} : -88.65dBm/15kHz	-0.6dB	N _{oc1} : -89.25dBm/15kHz
	N _{∞2} : -88.65dBm/15kHz	-0.6dB	N _{∞2} : -89.25dBm/15kHz
	Es ₁ / N _{oc1} : +10dB	0dB	Ês₁/N₀: +10dB
	Ês ₂ / N _{oc2} : +10dB	0dB	Ês ₂ / N _{oc} : +10dB
	Reported relative RSRP values:	Via mapping	$RSRP_{(x-9)}$ to $RSRP_{(x+9)}$
	±6dB	via mapping	
	EOGB		
	T+0.	T+0-	T+0.
	Test 2:	Test 2:	Test 2:
	$N_{\infty 1}$: $(N_{\infty 2} + 8dB)$	-1.0dB	$N_{\infty 1}$: $(N_{\infty 2} + 7dB)$
	Noc2: -117dBm to -113.5dBm	0dB	N _{oc2} : -117dBm to -113.5dBm
	/15kHz depending on operating		/15kHz depending on operating
	band		band
	Ês ₁ / N _{oc1} : +13dB	0dB	Ês ₁ / N _{oc1} : +13dB
	Ês ₂ / N _{oc2} : -4.0dB	0.8dB	Ês ₂ / N _{oc2} : -3.2dB
	L32/ N ₀₀₂ 4.00D	0.000	L32/ N ₀₀₂ 3.20D
	Demonstrational policy and policy	\	DODD (** 00) to DODD (** 40)
	Reported relative RSRP values:	Via mapping	RSRP_(x-32) to RSRP_(x-16)
	±6dB		
	The derivation of the RSRP values		
	2 RSRP from N _{oc1} and Ês ₁ / N _{oc1} ai	nd N $_{ m oc2}$ and Ês $_2$ / N $_{ m oc2}$, the allowed UE reporting
	accuracy, and the UE mapping fun		
	The RSRP values given above are		extreme conditions.
9.1.4.1 TDD Inter Frequency	Same as 9.1.3.1	Same as 9.1.3.1	Same as 9.1.3.1
Absolute RSRP Accuracy	Same as 5.1.5.1	Carrie as 5.1.5.1	Same as 3.1.5.1
9.1.4.2 TDD Inter Frequency	Same as 9.1.3.2	Same as 9.1.3.2	Same as 9.1.3.2
	Same as 9.1.3.2	Same as 9.1.3.2	Same as 9.1.3.2
Relative RSRP Accuracy		_	
9.1.5.1 FDD-TDD inter	Test 1:	Test 1:	Test 1:
frequency absolute RSRP	N _{oc1} : -88.65dBm/15kHz	-0.3dB	N _{∞1} : -88.95dBm/15kHz
Accuracy	N _{oc2} : -88.65dBm/15kHz	-0.3dB	N _{oc2} : -88.95dBm/15kHz
	Ês ₁ / N _{oc1} : +10dB	0dB	Ês ₁ /N _{oc} : +10dB
	Ês ₂ / N _{oc2} : +10dB	0dB	Ês ₂ /N _{oc} : +10dB
	202711002. 11003	ous	20271100. 1100.2
	Papartod absolute PSPP values:	Via manning	DSDD 52 to DSDD 71
	Reported absolute RSRP values:	Via mapping	RSRP_52 to RSRP_71
	±8dB		
	Test 2:	Test 2:	Test 2:
	N _{oc1} : -104dBm /15kHz	0dB	N _{oc1} : -104Bm /15kHz
	N _{oc2} : -112dBm/15kHz	0dB	N _{oc2} : -112dBm /15kHz
	Ês ₁ / N _{oc1} : +13dB	0dB	Ês ₁ / N _{oc1} : +13dB
	Ês ₂ / N _{oc2} : -4.0dB	0.8dB	Ês ₂ / N _{oc2} : -3.2dB
	L32/ N ₀₀₂ 4.00D	0.000	L32/ N ₀₀₂ 3.20D
	Danartad abaquita DCDD valuasi	\/io monning	DCDD 40 to DCDD 22
	Reported absolute RSRP values:	via mapping	RSRP_18 to RSRP_33
	±6dB		
9.1.5.2 FDD-TDD Inter	Test 1:	Test 1:	Test 1:
Frequency Relative RSRP	N _{oc1} : -88.65dBm/15kHz	-0.3dB	N _{oc1} : -88.95dBm/15kHz
Accuracy	N _{oc2} : -88.65dBm/15kHz	-0.3dB	N _{oc2} : -88.95dBm/15kHz
	Ês ₁ / N _{oc1} : +10dB	0dB	Ês₁/N₀: +10dB
	Ês ₂ / N _{oc2} : +10dB	0dB	Ês ₂ / N _{oc} : +10dB
	E-0.27 14002. 1 1 0 0 E	045	E02/140C. 110GD
	Paparted absolute PCPD values:	Via manning	DCDD (v. 0) to DCDD (v. 0)
	Reported absolute RSRP values:	Via mapping	RSRP_(x-8) to RSRP_(x+8)
	±6dB		
	Test 2:	Test 2:	Test 2:
	N _{oc1} : -104dBm /15kHz	-0.6dB	N _{oc1} : -104.6Bm /15kHz
	N _{oc2} : -112dBm/15kHz	0dB	N _{oc2} : -112dBm /15kHz
	Ês ₁ / N _{oc1} : +13dB	0dB	Ês ₁ / N _{oc1} : +13dB
	Ês ₂ / N _{oc2} : -4.0dB	0.8dB	Ês ₂ / N _{oc2} : -3.2dB
		3.345	
	Reported absolute RSRP values:	Via mapping	RSRP_(x-32) to RSRP_(x-16)
	±6dB	νια πιαμμπιχ	1.011 _(x-02) to NORF_(x-10)
	±00D		
		<u> </u>	1111111111111
	The derivation of the RSRP values		
	2 RSRP from N _{oc1} and Ês ₁ / N _{oc1} are		, the allowed UE reporting
	accuracy, and the UE mapping fun		
	The RSRP values given above are	for both normal and	extreme conditions.

9.1.6.1 FDD Absolute RSRP	N _{oc1} : -117dBm or -116dBm or -	0dB	N _{oc1} : -117dBm or -116dBm or -	
Accuracy for E-UTR A Carrier	115.5dBm or -115 dBm or -		115.5dBm or -115 dBm or -	
Aggregation	114dBm or -113.5dBm /15kHz		114dBm or -113.5dBm /15kHz	
	depending on operating band		depending on operating band	
	N_{oc2} : = N_{oc1} +1dB	0dB	N_{oc2} : = N_{oc1} + 1 dB	
	Ês ₁ / N _{oc1} : -4dB	0dB	$\hat{E}s_1/N_{\infty 1}$: -4dB	
	Ês ₂ /N _{o2c} : +3dB	0dB	Ês ₂ / N _{o2c} : +3dB	
	Ês ₃ /N _{o2c} : -1dB	0dB	Ês ₃ / N _{o2c} : -1dB	
	Reported RSRP values:			
	±6dB for normal conditions and	Via mapping	Cell 1:	
	±9dB for extreme conditions	Via mapping	RSRP_12 to RSRP_27	
			RSRP_13 to RSRP_28	
			RSRP_13 to RSRP_29	
			RSRP_14 to RSRP_29	
			RSRP_15 to RSRP_30	
			RSRP_15 to RSRP_31	
			depending on operating band	
			Cell 2:	
			RSRP_20 to RSRP_35	
			RSRP_21 to RSRP_36	
			RSRP_21 to RSRP_37	
			RSRP_22 to RSRP_37	
			RSRP_23 to RSRP_38	
			RSRP_23 to RSRP_39	
	TI 1 : :: :: :: :: : :: : : : : : : : : :		depending on Cell 1 band	
	The derivation of the RSRP values takes into account the uncertainty in Cell 1 RSRP			
	from N_{oc1} and $\hat{E}s_1/N_{oc1}$, the uncertainty in Cell 2 RSRP from N_{oc2} and $\hat{E}s_2/N_{oc2}$, the allowed UE reporting accuracy, and the UE mapping function.			
	The RSRP values given above are			
	are 3dB wider at each end for extre		s. III all cases the NONE values	
9.1.6.2 FDD Relative RSRP	N _{oc1} : -117dBm or -116dBm or -	lodB	N _{oc1} : -117dBm or -116dBm or -	
Accuracy for E-UTR A Carrier	115.5dBm or -115 dBm or -		115.5dBm or -115 dBm or -	
Aggregation	114dBm or -113.5dBm /15kHz		114dBm or -113.5dBm /15kHz	
. 39 3	depending on operating band		depending on operating band	
	N_{oc2} : = $N_{oc1} + 1dB$	0dB	N_{oc2} : = $N_{oc1} + 1 dB$	
	Ês ₁ / N _{oc1} : -4dB	0dB	Ês ₁ / N _{oc1} : -4dB	
	Ês ₂ / N _{o2c} : +3dB	0dB	Ês ₂ / N _{o2c} : +3dB	
	Ês ₃ / N _{o2c} : -1dB	+0.8dB	Ês ₃ / N _{o2c} : -0.2dB	
	D			
	Reported relative RSRP values:		(Call 2 Call 4):	
	(Cell 2 – Cell 1):	\	(Cell 2 – Cell 1):	
	±6dB (Cell 3 – Cell 2):	Via mapping	RSRP_(x-1) to RSRP_(x+17)	
	±3dB	Via mapping	(Cell 3 - Cell 2): RSRP_(x-8) to RSRP_(x+1)	
	±30B	via iliappilig	K3KP_(X-0) to K3KP_(X+1)	
	The derivation of the RSRP values	takes into account th	e uncertainty in Cell 1 RSRP	
	from N _{oc1} and Ês ₁ / N _{oc1} , the uncer			
	uncertainty in Cell 3 RSRP from És	3/Noc2, the allowed	UE reporting accuracy, and the	
	UE mapping function.		·	
	The RSRP values given above are			
9.1.7.1 TDD Absolute RSRP	Same as 9.1.6.1	Same as 9.1.6.1	Same as 9.1.6.1	
Accuracy for E-UTR A Carrier				
Aggregation				
9.1.7.2 TDD Relative RSRP	Same as 9.1.6.2	Same as 9.1.6.2	Same as 9.1.6.2	
9.1.7.2 TDD Relative RSRP Accuracy for E-UTR A Carrier Aggregation	Same as 9.1.6.2	Same as 9.1.6.2	Same as 9.1.6.2	

0.4.0.4.500.01	T	T (4	TT
9.1.8.1 FDD Absolute RSRP	Test 1:	Test 1:	Test 1:
Accuracy under Time Domain	N _{oc} : -106.0dBm/15kHz	0dB	N _{oc} : -106.0Bm/15kHz
Measurement Resource	Ês ₁ / N _{oc} : +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
Restriction with Non-MBSFN	Ês ₂ / N _{oc} : -2.0dB	0dB	Ês₂/N₀: -2.0dB
		= =	
ABS	Reported RSRP values: ±6dB	Via mapping	RSRP_25 to RSRP_40
	Test 2:	Test 2:	Test 2:
	N _{oc} : -88.0dBm/15kHz	0dB	N _{oc} : -88.0dBm/15kHz
	Ês ₁ / N _{oc} : +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
	Ês ₂ / N _o : -4.0dB	+0.8dB	Ês ₂ /N _o : -3.2dB
	Reported RSRP values: ±8dB	Via mapping	RSRP_40 to RSRP_59
	Test 3:	Tes <u>t 3:</u>	Test 3:
	N _∞ : -116dBm to -112.5dBm	0dB	N _{oc} : -116dBm to -112.5dBm
	/15kHz depending on operating	0.0.2	/15kHz depending on operating
	band		band
	Ês₁/N₀: +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
	Ês ₂ / N _{oc} : -4.0dB	+0.8dB	Ês ₂ / N _{oc} : -3.2dB
	Reported RSRP values: ±6dB	Via mapping	RSRP_14 to RSRP_29
	Tropolica North Values. ±00D	via mapping	
			RSRP_15 to RSRP_30
			RSRP_16 to RSRP_31
			RSRP_17 to RSRP_32
			depending on operating band
	The desired on of the DCDD values	talias into a securit th	
	The derivation of the RSRP values		
	from N _{oc} and Ês ₂ / N _{oc} , the allowed	UE reporting accurac	cy, and the UE mapping
	function.		
	The RSRP values given above are	for normal conditions	In all cases the RSRP values
	are 3dB wider at each end for extre		. III all cases the North values
			T
9.1.8.2 FDD Relative RSRP	Test 1:	<u>Test 1:</u>	Test 1:
Accuracy under Time Domain	N _{oc} : -106.0dBm/15kHz	0dB	N _{oc} : -106.0Bm/15kHz
Measurement Resource	Ês₁/N₀: +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
Restriction with Non-MBSFN	Ês ₂ / N _{oc} : -2.0dB	+0.8dB	Ês ₂ / N _{oc} : -1.2dB
		+0.80B	L52/ Noc. = 1.2UD
ABS	Reported relative RSRP values:		
	±2dB	Via mapping	RSRP_x-10 to RSRP_x-3
	Test 2:	Test 2:	Test 2:
	N _∞ : -88.0dBm/15kHz	0dB	N _{oc} : -88.0dBm/15kHz
	Ês₁/N₀: +5.0dB	0dB	Ês₁/N₀: +5.0dB
	Ês ₂ / N _{oc} : -4.0dB	+0.8dB	Ês₂/N₀c: -3.2dB
	Reported relative RSRP values:		
	±3dB	Via mapping	RSRP_x-13 to RSRP_x-4
	2008	via mapping	Kerti _x io te iterti _x i
	Took O.	Ta a t 2 :	Took O.
	Test 3:	Test 3:	Test 3:
	N _{oc} : -116dBm to -112.5dBm	0dB	N _∞ : -116dBm to -112.5dBm
	/15kHz depending on operating		/15kHz depending on operating
	band		band
	Ês₁/N₀: +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
			l a
	Ës ₂ / N _{oc} : -4.0dB	+0.8dB	Ës ₂ / N _{oc} : -3.2dB
	Reported relative RSRP values:		
	±3dB	Via mapping	RSRP_x-13 to RSRP_x-4
	The derivation of the RSRP values		
	2 RSRP from N _{oc} , Ês ₁ / N _{oc} and Ês		
		27 INOC, LITE ATTOWED U	Lieporting accuracy, and the
	UE mapping function.		
	The RSRP values given above are		
	allow 1dB wider at each end. Test	2, Test 3 RSRP value	s for extreme conditions are the
	same for normal conditions.		
9.1.9.1 TDD Absolute RSRP	Same as 9.1.8.1	Same as 9.1.8.1	Same as 9.1.8.1
	Carrio do 5.1.0.1	Came as 3.1.0.1	Carrio ao 5.1.0.1
Accuracy under Time Domain			
Measurement Resource			
Restriction with Non-MBSFN			
ABS			
	Comp. 00 0 4 0 0	Como co 0 4 0 0	Comp on 0.4.0.0
9.1.9.2 TDD Relative RSRP	Same as 9.1.8.2	Same as 9.1.8.2	Same as 9.1.8.2
		i .	į .
Accuracy under Time Domain			
Accuracy under Time Domain Measurement Resource			
Measurement Resource			

9.2.1.1 FDD Intra Frequency	Test 1:	Test 1:	Test 1:	
Absolute RSRQ Accuracy	N _∞ : -84.76dBm/15kHz	-0.75dB	N _{oc} : -85.51Bm/15kHz	
	Ês₁/N₀: +3.0dB	0dB	Ês ₁ / N _{oc} : +3.0dB	
	Ês ₂ / N _{oc} : +3.0dB	0dB	Ês ₂ / N _{oc} : +3.0dB	
	Reported RSRQ values: ±2.5dB	Via mapping	RSRQ_04 to RSRQ_16	
	Toot 2:	Test 2:	Toot 2:	
	<u>Test 2:</u> N _∞ : -103.85dBm/15kHz	0dB	<u>Test 2:</u> N _∞ : -103.85dBm/15kHz	
	$\hat{E}s_1/N_{oc}$: -2.9dB	0dB	Roc 103.63dBH/13kH2 Ês₁/No: -2.9dB	
	Ês ₂ /N _{oc} : -2.9dB	0dB	Ês ₂ /N _{oc} : -2.9dB	
	Reported RSRQ values: ±3.5dB	Via mapping	RSRQ 00 to RSRP 14	
		ina mapping		
	Test 3:	Tes <u>t 3:</u>	Test 3:	
	N _{oc} : -116dBm or -114dBm or -	0dB	N _{oc} : -116dBm or -114dBm or -	
	113dBm or -115dBm /15kHz		113dBm or -115dBm /15kHz	
	depending on operating band	0.4.15	depending on operating band	
	$\hat{\mathbb{E}}_{s_1}/N_{\infty}$: -4.0dB	+0.4dB	Ês₁/N₀: -3.6dB	
	Ês ₂ / N _{oc} : -4.0dB Reported RSRQ values: ±3.5dB	+0.4dB Via mapping	Ês₂ / N∞: -3.6dB RSRQ_00 to RSRQ_14	
	The derivation of the RSRQ values			
	from N_{∞} and $\hat{E}s_2/N_{\infty}$, the allowed			
	function.	TOL Teporting accurat	by, and the OL mapping	
	The RSRQ values given above are	e for normal conditions	s. For test 1 the RSRQ values	
	are 1.5dB wider at each end for extreme conditions, and for tests 2 and 3 the RSRQ			
	values are 0.5dB wider at each end			
9.2.2.1 TDD Intra Frequency	Test 1:	Test 1:	Test 1:	
Absolute RSRQ Accuracy	N _∞ : -84.76dBm/15kHz	-0.75dB	N _∞ : -85.51Bm/15kHz	
	Ês₁/N₀: +3.0dB	0dB	Ês ₁ / N _{oc} : +3.0dB	
	Ês ₂ /N _{oc} : +3.0dB	0dB	Ês₂/N₀: +3.0dB	
	Reported RSRQ values: ±2.5dB	Via mapping	RSRQ_04 to RSRQ_16	
	Test 2:	Test 2:	Test 2:	
	N _{oc} : -103.85dBm/15kHz	0dB	N₀c: -103.85dBm/15kHz	
	Ês ₁ / N _{oc} : -2.9dB	0dB	Ês₁/N∞: -2.9dB	
	Ês ₂ / N _{oc} : -2.9dB	0dB	Ês ₂ / N _{oc} : -2.9dB	
	Reported RSRQ values: ±3.5dB	Via mapping	RSRQ_00 to RSRQ_14	
	Test 3:	Test 3:	Test 3:	
	 N _{oc} : -116dBm/15kHz	0dB	N _{oc} : -116dBm/15kHz	
	Ês ₁ / N _{oc} : -4.0dB	+0.4dB	Ês₁/N₀: -3.6dB	
	Ês ₂ /N _{oc} : -4.0dB	+0.4dB	Ês₂/N₀: -3.6dB	
	Reported RSRQ values: ±3.5dB	Via mapping	RSRQ_00 to RSRQ_14	
	The derivation of the RSRQ values			
	from N_{oc} and $\hat{E}s_2/N_{oc}$, the allowed	I UE reporting accura	cy, and the UE mapping	
	function.	for a support of the state	Fortoct 4 the DODO color	
	The RSRQ values given above are			
	are 1.5dB wider at each end for ex	,	i ioi lest 2 the RSRQ values are	
	0.5dB wider at each end for extrem	ie conditions.		

9.2.3.1 FDD - FDD Inter	Test 1:	Test 1:	Test 1:
Frequency Absolute RSRQ	N _{oc1} : -80dBm/15kHz	0dB	N _{oc1} : -80dBm/15kHz
Accuracy	N ₀₀₂ : -80dBm/15kHz	-0.8dB	N _{oc2} : -80.8dBm/15kHz
,	Ês ₁ / N _{oc1} : -1.75dB	0dB	Ês ₁ / N _{oc1} : -1.75dB
	Ês ₂ / N _{oc2} : -1.75dB	0dB	Ês ₂ / N _{0c2} : -1.75dB
	Reported RSRQ values:	Via mapping	332
	±2.5dB for normal conditions and		RSRQ 04 to RSRQ 16 (NTC)
	±4dB for extreme conditions		RSRQ_01 to RSRQ_19 (ETC)
	Test 2:	Test 2:	Test 2:
	N _{oc1} : -104.7dBm/15kHz	0dB	N _{∞1} : -104dBm/15kHz
	N _{oc2} : -104.7dBm/15kHz	0dB	N _{oc2} : -104dBm/15kHz
	Ês ₁ / N _{oc1} : -4.0dB	0dB	Ês₁/N _{oc1} : -4dB
	Ês ₂ / N _{o2c} : -4.0dB	0.8dB	Ês ₂ / N _{o2c} : -3.2dB
	Reported RSRQ values:	Via mapping	
	±3.5dB for nomal conditions and		RSRQ 00 to RSRQ 16 (NTC)
	±4dB for extreme conditions		RSRQ 00 to RSRQ 17 (ETC)
	Test 3:	Test 3:	Test 3:
	N _{∞1} : -119.5dBm or -117.5dBm or	0dB	N _{∞1} : -119.5dBm or -117.5dBm
	-116dBm or -116.5 dBm or -		or -116 or -116.5dBm or -
	118.5dBm /15kHz depending on		118.5dBm /15kHz depending
	operating band		on operating band
	N ₀₀₂ : -119.5dBm or -117.5dBm or	0dB	
	-116dBm or -116.5dBm or -		N _{∞2} : -119.5dBm or -117.5dBm
	118.5dBm /15kHz depending on		or -116dBm or -116.5dBm or -
	operating band		118.5dBm /15kHz depending
	Ês ₁ / N _{oc1} : -4dB	0dB	on operating band
	Ês ₂ / N _{o2c} : -4dB	0.8dB	
			Ês₁/N _{∞1} : -4dB
	Reported RSRQ values:	Via mapping	Ês ₂ / N _{o2c} : -3.2dB
	±3.5dB for normal conditions and		
	±4dB for extreme conditions		
			RSRQ 00 to RSRQ 16 (NTC)
			RSRQ 00 to RSRQ 17 (ETC)
	The derivation of the RSRQ values		
	from N_{oc2} and $\hat{E}s_2/N_{oc2}$, the allowed	ed UE reporting accur	acy, and the UE mapping
	function.		

9.2.3.2 FDD - FDD Inter	Test 1:	Test 1:	Test 1:
Frequency Relative RSRQ	N _{oc1} : -80dBm/15kHz	-0.8dB	N _{oc1} : -80.8dBm/15kHz
Accuracy	N _{oc2} : -80dBm/15kHz	-0.8dB	N _{oc2} : -80.8dBm/15kHz
, isota, asy	Ês ₁ / N _{oc1} : -1.75dB	0dB	Ês ₁ / N _{oc1} : -1.75dB
	Ês ₂ / N _{oc2} : -1.75dB	0dB	Ês ₂ / N _{oc2} : -1.75dB
	Reported Relative RSRQ values:	Via mapping	
	±3dB for normal conditions and	11.559	RSRQ_x - 8 to RSRQ_x + 8
	±4dB for extreme conditions		(NTC)
			RSRQ_x - 10 to RSRQ_x + 10
	Test 2:	Test 2:	(ETC)
	N _{oc1} : -104.7dBm/15kHz	0dB	1 1 2 7
	N _{oc} 2: -104.7dBm/15kHz	0dB	Test 2:
	Ês ₁ / N _{oc1} : -4dB	0dB	N _{oc1} : -104.7dBm/15kHz
	Ês ₂ /N _{o2c} : -4dB	0.8dB	N _{oc2} : -104.7dBm/15kHz
	Reported Relative RSRQ values:	Via mapping	Ês ₁ / N _{oc1} : -4dB
	±4dB	11.0.1.1.0.	Ês ₂ /N _{o2c} : -3.2dB
	_ 143		202711020. 0.202
	Test 3:	Test 3:	RSRQ_x - 10 to RSRQ_x + 10
	N _{oc1} : -119.5dBm or -117.5dBm or	0dB	
	-116dBm or -116.5dBm or -		Test 3:
	118.5dBm /15kHz depending on		N _{0c1} : -119.5dBm or -117.5dBm
	operating band		or -116dBm or -116.5dBm or -
	N _{oc2} : -119.5dBm or -117.5dBm or	0dB	118.5dBm /15kHz depending
	-116 or -116.5dBm or -118.5dBm	042	on operating band
	/15kHz depending on operating		on operating same
	band		N ₀₀₂ : -119dBm or -117.5dBm
	Ês ₁ / N _{oc1} : -4dB	0dB	or -116dBm -116.5dBm or -
	Ês ₂ / N _{02c} : -4dB	0.8dB	118.5dBm /15kHz depending
	202711020. 143	0.042	on operating band
	Reported Relative RSRQ values:	Via mapping	on operating same
	±4dB	via mapping	Ês₁/N _{∞1} : -4dB
	± 100		Ês ₂ /N _{02c} : -3.2dB
			2027 1402C. 0.24B
			RSRQ_x - 10 to RSRQ_x + 10
	The derivation of the relative RSR0	values takes into ac	
	RSRQ from N _{oc1} and Ês ₁ / N _{oc1} and		
	UE reporting accuracy, and the UE		
9.2.4.1 TDD - TDD Inter	Same as 9.2.3.1	11 0	
Frequency Absolute RSRQ			
Accuracy			
9.2.4.2 TDD - TDD Inter	Same as 9.2.3.2		
Frequency Relative RSRQ			
Accuracy			
	1	1	1

9.2.4A.1 FDD - TDD Inter	Test 1:	Test 1:	Test 1:
Frequency Absolute RSRQ	N _{oc1} : -80dBm/15kHz	0dB	N _{0c1} : -80dBm/15kHz
Accuracy		-0.8dB	
Accuracy	N _{oc2} : -80dBm/15kHz		N _{∞2} : -80.8dBm/15kHz
	Es ₁ / N _{∞1} : -1.75dB	0dB	Es ₁ / N _{oc1} : -1.75dB
	Es ₂ /N _{oc2} : -1.75dB	0dB	Ês ₂ / N _{oc2} : -1.75dB
	Reported RSRQ values:	Via mapping	
	±2.5dB for normal conditions and		RSRQ 04 to RSRQ 16 (NTC)
	±4dB for extreme conditions		RSRQ 01 to RSRQ 19 (ETC)
	Test 2:	Test 2:	Test 2:
	N _{oc1} : -104.7dBm/15kHz	0dB	N _{oc1} : -104.7dBm/15kHz
	N _{oc2} : -104.7dBm/15kHz	0dB	N _{oc2} : -104.7dBm/15kHz
	Ês ₁ / N _{oc1} : -4.0dB	0dB	Ês ₁ / N _{oc1} : -4dB
	Ês ₂ / N _{o2c} : -4.0dB	0.8dB	Ês ₂ / N _{o2c} : -3.2dB
	Reported RSRQ values:	Via mapping	323 320
	±3.5dB for normal conditions and	via mapping	RSRQ 00 to RSRQ 16 (NTC)
	±4dB for extreme conditions		RSRQ 00 to RSRQ 17 (ETC)
	±40b for extreme conditions		KSKQ 00 to KSKQ 17 (E1C)
	Test 3:	Test 3:	Test 3:
	N _{oc1} : -114.5dBm/15kHz	0dB	N _{oc1} : -114.5dBm/15kHz
	N _{oc2} : -114.5dBm/15kHz	0dB	N _{0c2} : -114.5dBm/15kHz
	Ês ₁ / N _{oc1} : -4dB	0dB	Ês ₁ / N _{oc1} : -4dB
	Ës₂/N _{o2c} : -4dB	0.8dB	Ês ₂ / N _{o2c} : -3.2dB
	Reported RSRQ values:	Via mapping	
	±3.5dB for normal conditions and	via mapping	RSRQ 00 to RSRQ 16 (NTC)
	±4dB for extreme conditions		RSRQ 00 to RSRQ 17 (ETC)
		takaa into aaaaunt th	
	The derivation of the RSRQ values		
	from N_{oc2} and $\hat{E}s_2/N_{oc2}$, the allowed	ed OE reporting accur	acy, and the UE mapping
	function.	I T	I T
9.2.4A.2 FDD - TDD Inter	Test 1:	Test 1:	Test 1:
Frequency Relative Accuracy	N _{∞1} : -80dBm/15kHz	-0.8dB	N _{oc1} : -80.8dBm/15kHz
of RSRQ	N _{∞2} : -80dBm/15kHz	-0.8dB	N _{0c2} : -80.8dBm/15kHz
	Ës₁/N _{oc1} : -1.75dB	0dB	Ës ₁ / N _{oc1} : -1.75dB
	IA /		
	Ës ₂ / N _{oc2} : -1.75dB	0dB	Ês ₂ / N _{oc2} : -1.75dB
	Es ₂ / N _{oc2} : -1.75dB Reported Relative RSRQ values:		Ês ₂ / N ₀₀₂ : -1.75dB
		OdB Via mapping	
	Reported Relative RSRQ values:		RSRQ_x - 8 to RSRQ_x + 8
	Reported Relative RSRQ values: ±3dB for normal conditions and		RSRQ_x - 8 to RSRQ_x + 8 (NTC)
	Reported Relative RSRQ values: ±3dB for normal conditions and		RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10
	Reported Relative RSRQ values: ±3dB for normal conditions and		RSRQ_x - 8 to RSRQ_x + 8 (NTC)
	Reported Relative RSRQ values: ±3dB for normal conditions and		RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions	Via mapping Test 2:	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2:
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noct: -104.7dBm/15kHz	Via mapping Test 2: 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N∞1: -104.7dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz	Via mapping Test 2: 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{0:1} : -104.7dBm/15kHz N _{0:2} : -104.7dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Es ₁ /N _{oc1} : -4dB	Via mapping Test 2: 0dB 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Ês ₁ / N _{oc1} : -4dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês ₁ /Noc1: -4dB Ês ₂ /Noc: -4dB	Via mapping Test 2: 0dB 0dB 0dB 0dB 0.8dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{0:1} : -104.7dBm/15kHz N _{0:2} : -104.7dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês ₁ / Noc1: -4dB Ês ₂ / Noc2: -4dB Reported Relative RSRQ values:	Via mapping Test 2: 0dB 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Ês ₁ / N _{oc1} : -4dB Ês ₂ / N _{o2c} : -3.2dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês ₁ /Noc1: -4dB Ês ₂ /Noc: -4dB	Via mapping Test 2: 0dB 0dB 0dB 0dB 0.8dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Ês ₁ / N _{oc1} : -4dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Ês ₁ / N _{oc1} : -4dB Ês ₂ / N _{o2c} : -4dB Reported Relative RSRQ values: ±4dB	Via mapping Test 2: 0dB 0dB 0dB 0.8dB Via mapping	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês ₁ / Noc1: -4dB Ês ₂ / Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3:	Via mapping Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3:	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N _{oc1} : -104.7dBm/15kHz N _{oc2} : -104.7dBm/15kHz Ês ₁ / N _{oc1} : -4dB Ês ₂ / N _{oc2} : -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3:
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc: -114.5dBm/15kHz	Via mapping Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N ₀₀₁ : -104.7dBm/15kHz N ₀₀₂ : -104.7dBm/15kHz Ês ₁ / N ₀₀₁ : -4dB Ês ₂ / N ₀₂₀ : -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: N ₀₀₁ : -114.5dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc: -114.5dBm/15kHz Noc: -114.5dBm/15kHz	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N ₀₀₁ : -104.7dBm/15kHz N ₀₀₂ : -104.7dBm/15kHz Ês ₁ / N ₀₀₁ : -4dB Ês ₂ / N ₀₂₀ : -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: N ₀₀₁ : -114.5dBm/15kHz N ₀₀₂ : -114.5dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc: -114.5dBm/15kHz Noc: -114.5dBm/15kHz Es ₁ /Noc: -4dB	Via mapping Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz RSR_1 / Noc1: -4dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc: -114.5dBm/15kHz Noc: -114.5dBm/15kHz	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: N ₀₀₁ : -104.7dBm/15kHz N ₀₀₂ : -104.7dBm/15kHz Ês ₁ / N ₀₀₁ : -4dB Ês ₂ / N ₀₂₀ : -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: N ₀₀₁ : -114.5dBm/15kHz N ₀₀₂ : -114.5dBm/15kHz
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB 0dB 0dB 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz RSR_1 / Noc1: -4dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc: -104.7dBm/15kHz Noc: -104.7dBm/15kHz Ês ₁ /Noc: -4dB Ês ₂ /Noc: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc: -114.5dBm/15kHz Noc: -114.5dBm/15kHz Es ₁ /Noc: -4dB	Via mapping Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz LST Noc2: -114.5dBm/15kHz RSR_1/Noc2: -14dB LST Noc2: -13.2dB
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB 0dB 0dB 0dB 0dB 0dB 0dB 0variable 0va	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -14.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Es1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB Reported Relative RSRQ values: ±4dB The derivation of the relative RSRQ	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB 0dB 0dB 0dB 0values takes into accept the second control of the second co	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -14.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10 Escount the uncertainty in Cell 1
	Reported Relative RSRQ values: ±3dB for normal conditions and ±4dB for extreme conditions Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Ês1/Noc1: -4dB Ês2/Noc2: -4dB Reported Relative RSRQ values: ±4dB	Test 2: 0dB 0dB 0dB 0.8dB Via mapping Test 3: 0dB 0dB 0dB 0dB 0dB 0dB 0values takes into acid Cell 2 RSRQ from 1	RSRQ_x - 8 to RSRQ_x + 8 (NTC) RSRQ_x - 10 to RSRQ_x + 10 (ETC) Test 2: Noc1: -104.7dBm/15kHz Noc2: -104.7dBm/15kHz Ês1 / Noc1: -4dB Ês2 / Noc2: -3.2dB RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz Noc2: -114.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10 Test 3: Noc1: -14.5dBm/15kHz RSRQ_x - 10 to RSRQ_x + 10 Escount the uncertainty in Cell 1

9.2.5.1 FDD Absolute RSRQ Accuracy for E-UTR A Carrier Aggregation	N ₀₀₁ : -119.5dBm or -118.5dBm or -118dBm or -117.5 dBm or -116.5dBm or -116dBm /15kHz	0dB	N _{oc1} : -119.5dBm or -118.5dBm or -118dBm or -117.5 dBm or - 116.5dBm or -116.5dBm /15kHz
	depending on operating band N _{oc2} : -116dBm or -115dBm or -	0dB	depending on operating band N _{oc2} : -116dBm or -115dBm or -
	114.5dBm or -114 dBm or -		114.5dBm or -114 dBm or -
	113dBm or -112.5dBm /15kHz		113dBm or -112.5dBm /15kHz
	depending on operating band	040	depending on operating band
	Es ₁ / N _{oc1} : -4dB Ês ₂ / N _{o2c} : -4dB	0dB +0.3dB	Es ₁ / N _{oc1} : -4dB Ês ₂ / N _{o2c} : -3.7dB
	Ês ₃ / N _{02c} : -4dB	0dB	Ês ₃ / N _{o2c} : -4dB
	Reported RSRQ values:	Via mapping	<u>Cell 1:</u>
	±3.5dB for normal conditions and		RSRQ_00 to RSRQ_15 (NTC)
	±4dB for extreme conditions	Via mapping	RSRQ_00 to RSRQ_16 (ETC) Cell 2:
		l via iliappilig	RSRQ_00 to RSRQ_14 (NTC)
			RSRQ_00 to RSRQ_15 (ETC)
	The derivation of the RSRQ values		e uncertainty in Cell 1 RSRQ
	from N _{oc1} and Ês ₁ /N _{oc1} , the uncert		
9.2.5.2 FDD Relative RSRQ	allowed UE reporting accuracy, and N _{∞1} : -119.5dBm or -118.5dBm or		ction. N _{oc1} : -119.5dBm or -118.5dBm
Accuracy E-UTRA for Carrier	-118dBm or -117.5 dBm or -	UUD	or -118dBm or -117.5 dBm or -
Aggregation	116.5dBm or -116dBm /15kHz		116.5dBm or -116dBm /15kHz
33 - 3	depending on operating band		depending on operating band
	N _{oc2} : -116dBm or -115dBm or -	0dB	N _{oc2} : -116dBm or -115dBm or -
	114.5dBm or -114 dBm or - 113dBm or -112.5dBm /15kHz		114.5dBm or -114 dBm or -
	depending on operating band		113dBm or -112.5dBm /15kHz depending on operating band
	Es₁/N _{oc1} : -4dB	0dB	Ês₁/N _{∞1} : -4dB
	Ês ₂ /N _{o2c} : -4dB	+0.3dB	Ês ₂ / N _{o2c} : -3.7dB
	Ês ₃ / N _{o2c} : -4dB	0dB	Ês ₃ / N _{o2c} : -4dB
	Dana arta di DODO arabasas) <i>f</i> =	DODO 40 to DODO 0
	Reported RSRQ values: ±4dB	Via mapping	RSRQ_x - 12 to RSRQ_x + 9 (NTC and ETC)
9.2.6.1 TDD Absolute RSRQ	Same as 9.2.5.1	Same as 9.2.5.1	Same as 9.2.5.1
Accuracy for E-UTR A Carrier			
Aggregation			
9.2.6.2 TDD Relative RSRQ	Same as 9.2.5.2	Same as 9.2.5.2	Same as 9.2.5.2
Accuracy for E-UTR A Carrier Aggregation			
9.2.7.1 FDD RSRQ under Time	Test 1:	Test 1:	Test 1:
Domain Measurement	N _∞ : -84.76dBm/15kHz	-1.0dB	N _{oc} : -85.76Bm/15kHz
Resource Restriction with Non-	Ês₁/N₀: +5.0dB	0dB	Ês₁/N∞: +5.0dB
MBSFN ABS	Ës₂/N₀c: -2.0dB	+0.8dB	Ës₂/N∞: -1.2dB
	Reported RSRQ values: ±2.5dB	Via mapping	RSRQ_04 to RSRQ_16
	Test 2:	Test 2:	Test 2:
	N _∞ : -103.85dBm/15kHz	0dB	N _{oc} : -103.85dBm/15kHz
	Ês ₁ / N _{oc} : +5.0dB	0dB	Ês₁/N₀c: +5.0dB
	Es ₂ /N _{oc} : -2.0dB	+0.8dB	Es ₂ /N _{oc} : -1.2dB
	Reported RSRQ values: ±2.5dB	Via mapping	RSRQ_04 to RSRQ_16
	Test 3:	Test 3:	Test 3:
	N _∞ : -116dBm to -112.5dBm	0dB	N _∞ : -116dBm to -112.5dBm
	/15kHz depending on operating		/15kHz depending on operating
	band	0.15	band
	Es ₁ / N _{oc} : +5.0dB	0dB	Ês ₁ / N _{oc} : +5.0dB
	Es ₂ /N _o : -4.0dB Reported RSRQ values: ±3.5dB	+0.8dB Via mapping	Ës₂/N₀: -3.2dB RSRQ_00 to RSRQ_15
	The derivation of the RSRQ values		
	from N_{oc} and $\hat{E}s_2/N_{oc}$, the allowed		
	function.	. •	•
	The RSRQ values given above are		
	values are 1.5dB wider at each end		· ·
	values are 0.5dB wider at each end	a ioi exilettie conditto	110.

9.2.8.1 TDD RSRQ under Time	Subset of 9.2.7.1	Same as 9.2.7.1	Subset of 9.2.7.1
Domain Measurement			
Resource Restriction with Non-			
MBSFN ABS 9.3.1 E-UTRAN FDD - UTRA	Test 1:	Test 1:	Test 1:
FDD CPICH	E-UTRA Cell 1	16311.	E-UTRA Cell 1
RSCP absolute accuracy	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
,	Ês / Noc: +4.00dB	0dB	Ês / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -60.00dBm/3.84MHz	-0.75dB	loc: -60.75dBm/3.84MHz
	lor / loc: +9.54dB	0dB	lor/loc: +9.54dB
	CPICH_Ec/lor: -10.00dB	0dB	CPICH_Ec/lor: -10.00dB
	Reported CPICH_RSCP values: ±8dB	Via mapping	CPICH_RSCP_46 to CPICH_RSCP_63
	±0UD		CFICH_RSCF_63
	Test 2:	Test 2:	
	E-UTRA Cell 1	0.10	Test 2:
	Noc: -98.00dBm/15kHz Ês / Noc: +4.00dB	0dB 0dB	E-UTRA Cell 1 Noc: -98.00dBm/15kHz
	UTRA Cell 2	UUB	Ês / Noc: +4.00dB
	loc: -94.46dBm or -92.46dBm or -		UTRA Cell 2
	91.46dBm or -93.46dBm	0.7dB	loc: -93.76dBm or -91.76dBm
	/3.84MHz depending on		or -90.76dBm or -92.76dBm
	operating band	0.35dB	/3.84MHz depending on
	lor / loc: -9.54dB	0dB	operating band
	CPICH_Ec/lor: -10.00dB	Via mapping	lor/loc: -9.19dB
	Reported CPICH_RSCP values:		CPICH_Ec/lor: -10.00dB
	±6dB		CPICH_RSCP04 to CPICH_RSCP_9
			CPICH_RSCP02 to
			CPICH_RSCP_11
			CPICH_RSCP01 to
			CPICH_RSCP_12
			CPICH_RSCP03 to
			CPICH_RSCP_10
			depending on operating band
	The derivation of the CPICH_RSCI CPICH_RSCP from loc, lor / loc an		
	and the UE mapping function.	iu ofion_Ec/loi, the	anowed or reporting accuracy,
	The CPICH_RSCP values given at	nove are for normal co	onditions In all cases the
	CPICH_RSCP values are 3dB wide	er at each end for extr	eme conditions.
9.3.2 E-UTRAN TDD - UTRA	Same as 9.3.1		
FDD CPICH RSCP absolute			
accuracy			

9.4.1 E-UTRAN FDD – UTRA	Test 1:	Test 1:	Test 1:
FDD CPICH Ec/No absolute	E-UTRA Cell 1	100111	E-UTRA Cell 1
accuracy	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
,	Ês / Noc: +4.00dB	-0dB	Ês / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -52.22dBm/3.84MHz	-0.9dB	loc: -53.12dBm/3.84MHz
	lor / loc: -1.75dB	0.3dB	lor / loc: -1.45dB
	CPICH_Ec/lor: -10.00dB	0dB	CPICH_Ec/lor: -10.00dB
	Reported CPICH_Ec/lo accuracy	Via mapping	CPICH Ec/lo 17 to
	values: ±1.5dB for normal	3 311 3	CPICH_Ec/lo_24 for normal
	conditions and ±3dB for extreme		conditions. CPICH_Ec/lo_14 to
	conditions		CPICH Ec/lo 27 for extreme
			conditions
	Test 2:	Test 2:	Test 2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
	Ês / Noc: +4.00dB	0dB	Ês / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -87.27dBm/3.84MHz	0dB	loc: -87.27dBm/3.84MHz
	lor / loc: -4.7dB	0.3dB	lor / loc: -4.4dB
	CPICH_Ec/lor: -10.00dB	0dB	CPICH_Ec/lor: -10.00dB
	Reported CPICH_Ec/lo accuracy	Via mapping	CPICH_Ec/lo_13 to
	values: ±2dB for nomal		CPICH_Ec/lo_22 for nomal
	conditions and ±3dB for extreme		conditions. CPICH_Ec/lo_11 to
	conditions		CPICH_Ec/lo_24 for extreme
			conditions
		Test 3:	Test 3:
	Test 3:		E-UTRA Cell 1
	E-UTRA Cell 1	0dB	Noc: -98.00dBm/15kHz
	Noc: -98.00dBm/15kHz	0dB	Ês / Noc: +4.00dB
	Ês / Noc: +4.00dB		UTRA Cell 2
	UTRA Cell 2	0.7dB	loc: -93.76dBm or -91.76dBm
	loc: -94.46dBm or -92.46dBm or -		or -90.76dBm or -92.76dBm
	91.46dBm or -		/3.84MHz depending on
	93.46dBm/3.84MHz	0.4.15	operating band
		0.4dB	lor/loc: -9.14dB
		0dB	CPICH_Ec/lor: -10.00dB
	lor / loc: -9.54dB	Via mapping	CPICH_Ec/lo_3 to
	CPICH_Ec/lor: -10.00dB		CPICH_Ec/lo_16 for normal
	Reported CPICH_Ec/lo accuracy		and extreme conditions.
	values: ±3dB for nomal		
	conditions and extreme		
9.4.2 E-UTRAN TDD – UTRA	conditions Same as 9.4.1	Como oo 0 4 4	Sama as 0.4.4
FDD CPICH Ec/No absolute	Same as 9.4.1	Same as 9.4.1	Same as 9.4.1
accuracy			

9.5.1 E-UTRAN FDD – UTRA	Test 1:	Test 1:	Test 1:
TDD P-CCPCH RSCP	E-UTRA Cell 1		E-UTRA Cell 1
absolute accuracy	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
•	Ês / Noc: +4.00dB	0dB	Ês / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -54.1dBm/1.28MHz	-0.8dB	loc: -54.9dBm/1.28MHz
	lor / loc: 2.0dB	0dB	lor / loc: 2.0dB
	PCCPCH_E _C /I _{or} : -3dB	0dB	PCCPCH_E _C /I _{or} : -3dB
	DwPCH_E _C /I _{or} : 0dB	0dB	DwPCH_E _C /I _{or} : 0dB
	Reported PCCPCH RSCP		PCCPCH RSCP 51 to
	accuracy values: ±8dB for normal	Via mapping	PCCPCH RSCP 68 for normal
	conditions and ±11dB for extreme		conditions. PCCPCH RSCP 48
	conditions		to PCCPCH RSCP 71 for
			extreme conditions
	Test 2:	Test 2:	Test 2:
	E-UTRA Cell 1		E-UTRA Cell 1
	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
	Es / Noc: +4.00dB	0dB	Es / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -75.2dBm/1.28MHz	0dB	loc: -75.2dBm/1.28MHz
	lor / loc: 5.0dB	0dB	lor / loc: 5.0dB
	PCCPCH_E _C /I _{or} : -3dB	0dB	PCCPCH_E _C /l _{or} : -3dB
	DwPCH_E _C /I _{or} : 0dB	0dB	DwPCH_E _C /I _{or} : 0dB
	Reported PCCPCH RSCP	Via mapping	PCCPCH RSCP 34 to
	accuracy values: ±8dB for normal		PCCPCH RSCP 51 for normal
	conditions and ±11dB for extreme		conditions. PCCPCH RSCP 31
	conditions		to PCCPCH RSCP 54 for
			extreme conditions
	Test 3:	Test 3:	Test 3:
	E-UTRA Cell 1	10310.	E-UTRA Cell 1
	Noc: -98.00dBm/15kHz	0dB	Noc: -98.00dBm/15kHz
	Ês / Noc: +4.00dB	0dB	Ês / Noc: +4.00dB
	UTRA Cell 2		UTRA Cell 2
	loc: -97.0dBm/1.28MHz	0.8dB	loc: -96.2dBm/1.28MHz
	lor / loc: 0dB	0dB	lor / loc: 0dB
	PCCPCH_E _C /l _{or} : -3dB	0dB	PCCPCH_E _C /l _{or} : -3dB
	DwPCH_E _C /I _{or} : 0dB	0dB	DwPCH_E _C /l _{or} : 0dB
	Reported PCCPCH RSCP	Via mapping	PCCPCH RSCP 10 to
	accuracy values: ±6dB for normal	11 3	PCCPCH RSCP 23 for normal
	conditions and ±9dB for extreme		conditions. PCCPCH RSCP 07
	conditions		to PCCPCH RSCP 26 for
			extreme conditions
9.5.2 E-UTRAN TDD – UTRA	Same as 9.5.1	Same as 9.5.1	Same as 9.5.1
TDD P-CCPCH RSCP			
absolute accuracy			

9.6.1, GSM RSSI accuracy for	Subtest 1:	Subtest 1:	Subtest 1:	
E-UTRAN FDD	E-UTRA Cell 1	E-UTRA Cell 1	E-UTRA Cell 1	
	N _∞ : -98dBm/15kHz	<u>0</u> dB	N _{oc} : -98dBm/15kHz	
	Ês / N _o : +4dB	<u>0</u> dB	Ês / N _{oc} : +4dB	
	GSM Cell 2	GSM Cell 2	GSM Cell 2	
	Signal level: -38.5dBm	-0.2 dB	Signal level: -38.7dBm	
	GSM Cell 3	GSM Cell 3	GSM Cell 3	
	Signal level: -38.5dBm	<u>0</u> dB	Signal level: -38.5dBm	
	Subtoot 2:	Subtoot 2:	Subtont 2:	
	Subtest 2:	Subtest 2:	Subtest 2:	
	E-UTRA Cell 1	E-UTRA Cell 1	E-UTRA Cell 1	
	N _∞ : -98dBm/15kHz	<u>0</u> dB	N _{oc} : -98dBm/15kHz	
	Ës / N _{oc} : +4dB	<u>0</u> dB	Ês / N₀: +4dB	
	GSM Cell 2	GSM Cell 2	GSM Cell 2	
	Signal level: -48.5dBm	<u>-0.2</u> dB	Signal level: -48.7dBm	
	GSM Cell 3	GSM Cell 3	GSM Cell 3	
	Signal level: -48.5dBm	<u>-1.5</u> dB	Signal level: -50.0dBm	
		0.14.40	0.14.40	
	Subtest 3:	Subtest 3:	Subtest 3:	
	E-UTRA Cell 1	E-UTRA Cell 1	E-UTRA Cell 1	
	N₀c: -98dBm/15kHz	<u>0</u> dB	N₀: -98dBm/15kHz	
	Es / N _{oc} : +4dB	<u>0</u> dB	Es / N _{oc} : +4dB	
	GSM Cell 2	GSM Cell 2	GSM Cell 2	
	Signal level: -70.5dBm	<u>-0.2</u> dB	Signal level: -70.7dBm	
	GSM Cell 3	GSM Cell 3	GSM Cell 3	
	Signal level: -70.5dBm	<u>0</u> dB	Signal level: -70.5dBm	
	Subtest 4:	Subtest 4:	Subtest 4:	
	E-UTRA Cell 1	E-UTRA Cell 1	E-UTRA Cell 1	
	N _∞ : -98dBm/15kHz	<u>0</u> dB	N _{oc} : -98dBm/15kHz	
	Ês / N _{oc} : +4dB	0 dB	Ês / N _{oc} : +4dB	
	GSM Cell 2	GSM Cell 2	GSM Cell 2	
	Signal level: -109.5dBm	+0.2 dB	Signal level: -109.3dBm	
	GSM Cell 3	GSM Cell 3	GSM Cell 3	
	Signal level: -109.5dBm	<u>0</u> dB	Signal level: -109.5dBm Subtest 5:	
	Subtest 5:	Subtest 5:	E-UTRA Cell 1	
		E-UTRA Cell 1	N _∞ : -98dBm/15kHz	
	E-UTRA Cell 1		l a	
	N _∞ : -98dBm/15kHz	<u>0</u> dB	Es / N _{oc} : +4dB	
	Ês / N₀c: +4dB	0 dB	GSM Cell 2	
	GSM Cell 2	GSM Cell 2	Signal level: -57.5dBm	
	Signal level: -57.5dBm	0.dB	GSM Cell 3	
	GSM Cell 3	GSM Cell 3	Signal level: -54.5dBm	
	Signal level: -54.5dBm	<u>0</u> dB	Subtest 6:	
	Subtest 6:	Subtest 6:	E-UTRA Cell 1	
	E-UTRA Cell 1	E-UTRA Cell 1	N _∞ : -98dBm/15kHz	
	N _{oc} : -98dBm/15kHz	<u>0</u> dB	Ês / N _{oc} : +4dB	
	Ês / N _{oc} : +4dB	<u>0</u> dB	GSM Cell 2	
	GSM Cell 2	GSM Cell 2	Signal level: -64.5dBm	
	Signal level: -64.5dBm	0dB	GSM Cell 3	
	GSM Cell 3	GSM Cell 3	Signal level: -59.5dBm	
	Signal level: -59.5dBm	0 dB	Signal lovel39.30DIII	
	C.g. G. Totol. Obloadill	- "-	Subtest 7:	
	Subtest 7:	Subtest 7:	E-UTRA Cell 1	
	E-UTRA Cell 1	E-UTRA Cell 1	N _∞ : -98dBm/15kHz	
	N _{oc} : -98dBm/15kHz	0 dB	Ês / N _{oc} : +4dB	
	Ês / N _{oc} : +4dB	<u>0</u> dB	GSM Cell 2	
	GSM Cell 2	GSM Cell 2	Signal level: -71.5dBm	
	Signal level: -71.5dBm	0dB	GŠM Cell 3	
	GSM Cell 3	GSM Cell 3	Signal level: -64.5dBm	
	Signal level: -64.5dBm	<u>0</u> dB		
			Subtest 8:	
	Subtest 8:	Subtest 8:	E-UTRA Cell 1	
	E-UTRA Cell 1	E-UTRA Cell 1	N₀c: -98dBm/15kHz	
	N _∞ : -98dBm/15kHz	<u>0</u> dB	Es / N _{oc} : +4dB	
	Ës / N _{oc} : +4dB	<u>0</u> dB	GSM Cell 2	
	GSM Cell 2	GSM Cell 2	Signal level: -78.5dBm	
	Signal level: -78.5dBm	<u>0</u> dB	GSM Cell 3	ງງດ
	GSM Cell 3 3GPP	GSM Cell 3	Signal level: -69.5dBm 13	329
	Signal level: -69.5dBm	<u>0</u> dB	Subtoct 0:	

9.6.2, GSMRSSI accuracy for	Same as 9.6.1	Same as 9.6.1	Same as 9.6.1
E-UTRAN TDD			

Annex G (normative): Statistical Testing

G.1 General

FSS

G.2 Statistical testing of delay and UE measurement performance in RRM tests

G.2.1 General

The RRM tests are either of deterministic or of statistical nature. The pass fail limits in tests of statistical nature are expressed as a limit (e.g. delay limit) and a success ratio applicable for the limit. The success ratio is 90% uniform (the complement is the error ratio ER = 10%).

G.2.2 Design of the test

The test is defined by the following design principles (see TS 36.521-1 clause G.X, Theory):

- 1) The early decision concept is applied.
- 2) A second limit is introduced: bad DUT factor M>1

To decide the test pass:

Supplier risk is applied based on the bad DUT quality

To decide the test fails

Customer risk is applied based on the specified DUT quality

The test is defined by the following parameters:

- 1) Limit ER = 0.1 (success ratio = 90%)
- 2) Bad DUT factor M=1.5 (selectivity)
- 3) Confidence level CL = 95% (for specified DUT and bad DUT-quality)

G.2.3 Numerical definition of the pass fail limits

Table G.2.3-1: pass fail limits

ne	nsp	ns _f	ne	nsp	ns _f	ne	nsp	ns _f	ne	nsp	ns _f
0	33	NA	43	408	283	86	737	644	129	1056	1021
1	46	NA	44	416	291	87	745	653	130	1064	1030
2	58	2	45	424	299	88	752	661	131	1071	1039
3	69	5	46	432	307	89	760	670	132	1078	1048
4	79	8	47	440	315	90	767	679	133	1086	1057
5	89	12	48	447	324	91	775	687	134	1093	1066
6	99	17	49	455	332	92	782	696	135	1100	1074
7	109	22	50	463	340	93	790	705	136	1108	1083
8	118	27	51	471	348	94	797	713	137	1115	1092
9	127	33	52	478	356	95	804	722	138	1122	1101
10	136	39	53	486	365	96	812	731	139	1130	1110
11	145	45	54	494	373	97	819	739	140	1137	1119
12	154	51	55	502	381	98	827	748	141	1144	1128
13	163	58	56	509	389	99	834	757	142	1152	1137
14	172	64	57	517	398	100	842	766	143	1159	1147
15	180	71	58	525	406	101	849	774	144	1166	1155
16	189	78	59	532	414	102	857	783	145	1174	1164
17	197	85	60	540	423	103	864	792	146	1181	1173
18	206	92	61	548	431	104	871	801	147	NA	1182
19	214	99	62	555	440	105	879	809	148		
20	223	106	63	563	448	106	886	818	149		
21	231	113	64	571	456	107	894	827	150		
22	239	120	65	578	465	108	901	836	151		
23	248	128	66	586	473	109	909	844	152		
24	256	135	67	594	482	110	916	853	153		
25	264	142	68	601	490	111	923	862	154		
26	272	150	69	609	499	112	931	871	155		
27	281	157	70	616	507	113	938	880	156		
28	289	165	71	624	516	114	946	888	157		
29	297	173	72	632	524	115	953	897	158		
30	305	180	73	639	533	116	960	906	159		
31 32	313 321	188 196	74 75	647 654	541 550	117 118	968 975	915 924	160 161		
33	321	204	75 76	662	558		983	933	162		
33	329	204	76	669	567	119 120	983	933	163		
35	345	219	78	677	575	121	990	950	164		
36	353	219	79	684	584	121	1005	950	165		
37	361	235	80	692	592	123	1012	968	166		
38	369	243	81	700	601	123	1012	977	167		
39	377	251	82	707	610	125	1019	986	168		
40	385	259	83	715	618	126	1027	994	169		
41	393	267	84	722	627	127	1042	1003	100		
42	400	275	85	730	635	128	1049	1012		1	
74	1 700	210	00	730	000	120	1043	1012	<u> </u>	l	

The first column is the number of errors (ne = number of exceeded delays or number of wrong reports)

The second column is the number of samples for the pass limit (ns_p , ns=Number of samples= number of successes + number of exceedings or number of reports)

The third column is the number of samples for the fail limit (ns_f)

G.2.4 Pass fail decision rules

The pass fail decision rules apply for a single test, comprising one component in the test vector. The over all Pass /Fail conditions are defined in clause G.2.6

Having observed 0 errors, pass the test at 33+ samples, otherwise continue

Having observed 1 error, pass the test at 46+ samples, otherwise continue

Having observed 2 errors, pass the test at 58+ samples, fail the test at 2 samples, otherwise continue

Having observed 146 errors, pass the test at 1181+ samples, fail the test at 1173- samples, otherwise continue

Having observed 147 errors, fail the test at 1182-samples,

Where x+ means: x or more, x- means x or less

NOTE 1: an ideal DUT passes after 33 samples. The maximum test time is 1181 samples.

G.2.5 Void

G.2.6 Test conditions for delay tests and UE measurement performance

Table G.2.6-1: test conditions

Test	Statistical independence	Number of components in the test vector, as specified in the test requirements and initial conditions of the applicable test	-	Over all Pass/Fail condition
All tests in clauses 4, 5, 6.1, 7.2, 7.3 and 8 are delay tests of statistical nature while 6.2 and 7.1 are not applicable, since deterministic.	Test procedure in all statistical tests ensures independency	1 per operating band (if tested, see 3A.3.3)		Full set of environmental conditions (5) per operating band
All tests in clause 9 are UE level reports of statistical nature	Independency is assumed, although Layer 1 filtering is applied to the reported results	Full set of environmental conditions (5) per operating band		Full set of environmental conditions (5) per operating band

G.X Theory to derive the numbers in Table G.2.3-1 (informative)

TS 36.521-1 Annex G.X applies

Annex H (normative): Default Message Contents

This annex contains the default values of common messages specific to RRM, other than those described in TS 36.508 [7]. The message contents shall apply to test cases accordingly and unless indicated otherwise in specific test cases, shall be transmitted and checked by the system simulator. The default message contents can be defined for FDD Mode, or TDD Mode or both FDD/TDD Modes. All the messages are listed in alphabetical order based on conformance tests.

NOTE: For example, test case 8.1.1 has an exception for RRCConnectionReconfiguration message and therefore uses message contents according to TS 36.508 [7] with the exception of the RRCConnectionReconfiguration message specified in Annex H.

H.1 Common contents of system information messages exceptions

This clause contains the default values of common system in formation messages, other than those described in TS 36.508 [7].

H.2 Common contents of system information blocks exceptions

This clause contains the default values of common system information blocks, other than those described in TS 36.508 [7].

H.2.1 System information blocks message contents exceptions for E-UTRAN intra frequency cell re-selection

SystemInformationBlockType3: (FDD/TDD) for E-UTRAN intra-frequency cell re-selection

Table H.2.1-1: SystemInformationBlockType3: E-UTRAN intra frequency cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType3				
Information Element	Value/remark	Comment	Condition	
cellReselectionInfoCommon SEQUENCE {				
q-Hyst	dB0 (0 dB)	0 is actual value in		
		dB (0 * 2 dB)		
}				

SystemInformationBlockType4: (FDD/TDD) for E-UTRAN intra-frequency cell re-selection

For Cell 2

Table H.2.1-2: SystemInformationBlockType4: E-UTRAN intra frequency cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-3 SystemInformationBlockType4				
Information Element	Value/remark	Comment	Condition	
intraFreqNeighCellList SEQUENCE (SIZE				
(1maxCellIntra)) OF SEQUENCE {				
IntraFreqNeighCellInfo ::= SEQUENCE {				
physCellId	0 (Cell 1 ld)	INTEGER (0503)		
q-OffsetCell	dB0 (0 dB)	0 is actual value in		
		dB (0 * 2 dB)		
}				
}				

H.2.2 System information blocks message contents exceptions for E-UTRAN inter frequency cell re-selection

SystemInformationBlockType3: (FDD/TDD) for E-UTRAN inter-frequency cell re-selection

Table H.2.2-1: SystemInformationBlockType3: E-UTRAN inter frequency cell re-selection

Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearch	25 (50 dB)	50 is actual value in dB (25 * 2 dB); for Cell 1	Cell 1
	Not Present		Cell 2
threshServingLow	22 (44 dB)	44 is actual value in dB (22 * 2 dB)	
cellRes election Priority	4		Cell 1
	5		Cell 2

SystemInformationBlockType5: (FDD/TDD) for E-UTRAN inter-frequency cell re-selection case

For Cell 1

Table H.2.2-2: SystemInformationBlockType5: E-UTRAN inter frequency cell re-selection

Information Element	Value/remark	Comment	Condition
nterFreqCarrierFreqList SEQUENCE (SIZE 1maxFreq)) OF SEQUENCE {			
q-Rxlevmin	-70 (-140 dBm)	-140 is actual value in dBm (-70 * 2 dBm)	
threshX-High	24 (48 dB)	48 is actual value in dB (24 * 2 dB)	
threshX-Low	25 (50 dB)	50 is actual value in dB (25 * 2 dB)	
cellReselectionPriority[n]	5 for cell 1		

For Cell 2

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table	4.4.3.3-4 SystemInformatio	nBlockType5	
Information Element	Value/remark	Comment	Condition
interFreqCarrierFreqList SEQUENCE (SIZE			
(1maxFreq)) OF SEQUENCE {			
q-Rxlevmin	-70 (-140 dBm)	-140 is actual value in dBm (-70 * 2 dBm)	
threshX-High	24 (48 dB)	48 is actual value in dB (24 * 2 dB)	
threshX-Low	25 (50 dB)	50 is actual value in dB (25 * 2 dB)	
cellReselectionPriority[n]	4 for cell 2		
interFreqNeighCellList[n] SEQUENCE (SIZE (1maxCellInter)) OF SEQUENCE {			
physCellId	0 (Cell 1 ld)	INTEGER (0503)	
q-OffsetCell	dB0 (0 dB)	0 is actual value in dB (0 * 2 dB)	
}			

H.2.3 System information blocks message contents exceptions for E-UTRAN inter-RAT cell re-selection

SystemInformationBlockType3: for inter-RAT EUTRAN FDD - UTRA FDD is of higher priority cell re-selection

Table H.2.3-1: SystemInformationBlockType3: Inter-RAT E-UTRAN FDD - UTRA FDD is of higher priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table	4.4.3.3-2 SystemInforma	ationBlockType3	
Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearch	25 (50 dB)	50 is actual value in dB (25 * 2 dB); for Cell 1 (E-UTRA)	
}		_	

SystemInformationBlockType6: for inter-RAT EUTRAN FDD - UTRA FDD is of higher priority cell re-selection

Table H.2.3-2: SystemInformationBlockType6: Inter-RAT E-UTRAN FDD - UTRA FDD is of higher priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.	4.3.3-5 SystemInformationBl	ockType6	
Information Element	Value/remark	Comment	Condition
CarrierFreqListUTRA-FDD ::= SEQUENCE (SIZE			UTRA-FDD
(1maxUTRA-FDD-Carrier)) OF SEQUENCE {			
threshX-High	20 (40 dB)	40 is actual value	
		in dB (20 * 2 dB)	
q-RxLevMin	-58 (-115 dBm)	-115 is actual value	
		in dBm (-58 * 2 + 1	
		dBm)	
p-MaxUTRA	21 (21 dBm)	Default value in TS	
		36.508	
q-QualMin	-20 (-20 dB)		
cellReselectionPriority[n]	5	UTRA is of higher	
		priority than E-	
		UTRAN	
}			

SystemInformationBlockType3: for inter-RAT EUTRAN TDD - UTRA TDD is of higher priority cell re-selection

Table H.2.3-3: SystemInformationBlockType3: Inter-RAT E-UTRAN TDD - UTRA TDD is of higher priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType3				
Information Element	Value/remark	Comment	Condition	
cellReselectionServingFreqInfo SEQUENCE {				
s-NonIntraSearch	23 (46 dB)	46 is actual value		
		in dB (23 * 2 dB);		
		for Cell 1 (E-UTRA)		
}				

SystemInformationBlockType6: for inter-RAT EUTRAN TDD - UTRA TDD is of higher priority cell re-selection

Table H.2.3-4: SystemInformationBlockType6: Inter-RAT E-UTRAN TDD - UTRA TDD is of higher priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-5 SystemInformationBlockType6				
Information Element	Value/remark	Comment	Condition	
CarrierFreqListUTRA-TDD ::= SEQUENCE (SIZE			UTRA-TDD	
(1maxUTRA-TDD-Carrier)) OF SEQUENCE {				
threshX-High	12 (24 dB)	24 is actual value		
		in dB (12 * 2 dB)		
q-RxLevMin	-52 (-103 dBm)	-103 is actual		
		value in dBm (-52		
		* 2 + 1 dBm)		
p-MaxUTRA	21 (21 dBm)			
cellReselectionPriority[n]	5	UTRA is of higher		
		priority than E-		
		UTRAN		
}				

SystemInformationBlockType3: for inter-RAT EUTRAN FDD/TDD - UTRA FDD is of lower priority cell reselection

Table H.2.3-5: SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD - UTRA FDD is of lower priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType3			
Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
threshServingLow	22 (44 dB)	44 is actual value in dB (22 * 2 dB)	

SystemInformationBlockType6: for inter-RAT EUTRAN FDD/TDD - UTRA FDD is of lower priority cell reselection

Table H.2.3-6: SystemInformationBlockType6: Inter-RAT E-UTRAN FDD/TDD - UTRA FDD is of lower priority cell re-selection

Information Element	Value/remark	Comment	Condition
CarrierFreqListUTRA-FDD ::= SEQUENCE (SIZE (1maxUTRA-FDD-Carrier)) OF SEQUENCE {			UTRA-FDD
threshX-Low	21 (42 dB)	42 is actual value in dB (21 * 2 dB)	
q-RxLevMin	-58 (-115 dBm)	-115 is actual value in dBm (-58 * 2 + 1 dBm)	
p-MaxUTRA	21 (21 dBm)		
q-QualMin	-20 (-20 dB)		
}			

SystemInformationBlockType3: for inter-RAT EUTRAN FDD/TDD - UTRA TDD is of lower priority cell reselection

Table H.2.3-7: SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD - UTRA TDD is of lower priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType3			
Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
threshServingLow	23 (46 dB)	46 is actual value	
		in dB (23 * 2 dB)	

SystemInformationBlockType6: for inter-RAT EUTRAN FDD/TDD - UTRA TDD is of lower priority cell reselection

Table H.2.3-8: SystemInformationBlockType6: Inter-RAT E-UTRAN FDD/TDD - UTRA TDD is of lower priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-5 SystemInformationBlockType6				
Information Element	Value/remark	Comment	Condition	
CarrierFreqListUTRA-TDD ::= SEQUENCE (SIZE (1maxUTRA-TDD-Carrier)) OF SEQUENCE {			UTRA-TDD	
threshX-Low	12 (24 dB)	24 is actual value in dB (12 * 2 dB)		
q-RxLevMin	-52 (-103 dBm)	-103 is actual value in dBm (-52 * 2 + 1 dBm)		
p-MaxUTRA	21 (21 dBm)			
}				

SystemInformationBlockType3: (FDD/TDD) for inter-RAT E-UTRAN - GSM cell re-selection

Table H.2.3-9: SystemInformationBlockType3: Inter-RAT E-UTRAN - GSM cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType3			
Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearch	Not sent		
threshServingLow	22 (44 dB)	44 is actual value in dB (22 * 2 dB)	
cellReselectionPriority	4		

SystemInformationBlockType7: (FDD/TDD) for inter-RAT E-UTRAN - GSM cell re-selection

Table H.2.3-10: SystemInformationBlockType7: Inter-RAT E-UTRAN - GSM cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-6 SystemInformationBlockType7			
Information Element	Value/remark	Comment	Condition
commonInfo SEQUENCE {			
cellReselectionPriority	0		
ncc-Permitted	'11111111B		
q-RxLevMin	5 (-105 dBm)	-105 is actual value in dBm (5 * 2 - 115 dBm)	
p-MaxGERAN	23 (23 dBm)		GSM 400 & GSM 900 & GSM 850 & GSM 700
	24 (24 dBm)		DCS 1800 & PCS 1900
threshX-High	12 (24 dB)	24 is actual value in dB (12 * 2 dB)	
threshX-Low	12 (24 dB)	24 is actual value in dB (12 * 2 dB)	

SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD - HRPD is of lower priority cell re-selection

Table H.2.3-11: SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD - HRPD is of lower priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Tabl	e 4.4.3.3-2 SystemInformati	onBlockType3	
Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearch	Notsent		
threshServingLow	22 (44 dB)	44 is actual value in dB (22 * 2 dB)	
cellReselectionPriority	1		
}			
intraFreqCellReselectionInfo SEQUENCE {			
q-RxLevMin	-70 (-140 dBm)	For RF/RRM test	
		cases	
s-IntraSearch	Not present		
t-ReselectionEUTRA	0		

SystemInformationBlockType8: Inter-RAT E-UTRAN FDD/TDD - HRPD is of lower priority cell re-selection

Table H.2.3-12: SystemInformationBlockType8: Inter-RAT E-UTRAN FDD/TDD - HRPD is of lower priority cell re-selection

Information Element	Value/remark	Comment	Condition
cellReselectionParametersHRPD SEQUENCE {			
bandClassList SEQUENCE (SIZE (1maxCDMA	1 entry		
-BandClass)) OF SEQUENCE {			
cellReselectionPriority	0		
threshX-High	60(-30)	INTEGER (063)	
threshX-Low	28(-14)	INTEGER (063)	
}			
}			
t-ReselectionCDMA2000	0	INTEGER (07)	

System Information Block Type 3: for E-UTRAN to UTRAN inter-RAT cell re-selection

Table H.2.3-13: System Information Block type3: Inter-RAT E-UTRAN FDD/TDD - UTRAN FDD cell reselection

Derivation Path: 34.108 clause 6.1.0b			
Information Element	Value/remark	Comment	Condition
- Cell selection and reselection info			
- Qqualmin	-20		
- Qrxle vlmin	-58 (-115dBm)		
- Maximum allowed UL TX power	21		

Table H.2.3-14: System Information Block type 3 (1.28 Mcps TDD): inter-RAT E-UTRAN FDD/TDD – UTRAN TDD cell re-selection

Derivation Path: 34.108 clause 6.1.0b			
Information Element	Value/remark	Comment	Condition
- SIB4 Indicator	TRUE		
- Cell identity	0000 0000 0000 0000		
	0000 0000 0001B		
- Cell selection and re-selection info			
- Mapping info	Not present		
- Cell selection and reselection quality measure	(no data)		
- CHOICE mode	TDD		
- Sintrasearch	10 dB		
- Sintersearch	10 dB		
- SsearchHCS	Not present		
- RAT List	Not present		
- Qrxlevmin	-103 dBm		
- Qhyst1s	0 dB		
- Treselections	0 seconds		
- HCS Serving cell information	Not present		

SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD – cdma2000 1xRTT is of lower priority cell re-selection

Table H.2.3-15: SystemInformationBlockType3: Inter-RAT E-UTRAN FDD/TDD - cdma2000 1xRTT is of lower priority cell re-selection

Information Element	Value/remark	Comment	Condition
cellReselectionServingFreqInfo SEQUENCE {			
s-NonIntraSearch	Not sent		
threshServingLow	22 (44 dB)	44 is actual value in dB (22 * 2 dB)	
cellReselectionPriority	1		
}			
intraFreqCellReselectionInfo SEQUENCE {			
q-RxLevMin	-70 (-140 dBm)	For RF/RRM test	
		cases	
s-IntraSearch	Not present		
t-ReselectionEUTRA	0		
}			

SystemInformationBlockType8: Inter-RAT E-UTRAN FDD/TDD – cdma2000 1xRTT is of lower priority cell re-selection

Table H.2.3-16: SystemInformationBlockType8: Inter-RAT E-UTRAN FDD/TDD - cdma2000 1xRTT is of lower priority cell re-selection

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-7 SystemInformationBlockType8			
Information Element	Value/remark	Comment	Condition
cellReselectionParameters1XRTT SEQUENCE {			1XRTT
longCodeState1XRTT	Not Present		
cellReselectionParameters1XRTT SEQUENCE {			
bandClassList SEQUENCE (SIZE (1maxCDMA	1 entry		
-BandClass)) OF SEQUENCE {			
cellReselectionPriority	0		
threshX-High	60(-30)	INTEGER (063)	
threshX-Low	56(-28)	INTEGER (063)	
}			
t-ReselectionCDMA2000	0	INTEGER (07)	
t-ReselectionCDMA2000-SF	Not Present		
}			
}			
}			

H.2.4 System information blocks message contents exceptions for E-UTRAN radio link monitoring (RLM)

SystemInformationBlockType2: (FDD/TDD) for E-UTRAN Radio Link Monitoring test for out-of-sync

Table H.2.4-1: SystemInformationBlockType2: E-UTRAN Radio Link Monitoring test for out-of-sync

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-2 SystemInformationBlockType2				
Information Element	Value/remark	Comment	Condition	
SystemInformationBlockType 2 ::= SEQUENCE {				
radioResourceConfigCommon SEQUENCE {				
pdsch-ConfigCommon SEQUENCE {				
referenceSignalPower	Set to an arbitrarily	The selected IE		
	selected value above	value depends on		
	-11dBm and within the IE	the test system		
	allowed range described	implementation		
	in 36.331[5]	and should be		
		declared in the test		
		report.		
}				
soundingRS-UL-ConfigCommon CHOICE {				
release	NULL			
}				
}				
ue-Timers And Constants {				
t300	ms 1000			
t301	ms 1000			
t310	ms0			
n310	n1			
t311	ms 1000			
n311	n1			
}				

SystemInformationBlockType2: (FDD/TDD) for E-UTRAN Radio Link Monitoring test for in-sync

Table H.2.4-2: SystemInformationBlockType2: E-UTRAN Radio Link Monitoring test for in-sync

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4	.4.3.3-2 SystemInformationB	lockType2	
Information Element	Value/remark	Comment	Condition
SystemInformationBlockType 2 ::= SEQUENCE {			
radioResourceConfigCommon SEQUENCE {			
pdsch-ConfigCommon SEQUENCE {			
referenceSignalPower	Set to an arbitrarily selected value above -11dBm and within the IE allowed range described in 36.331[5]	The selected IE value depends on the test system implementation and should be declared in the test report.	
}			
soundingRS-UL-ConfigCommon CHOICE {			
release	NULL		
}			
}			
ue-Timers And Constants {			
t300	ms1000		
t301	ms1000		
t310	ms2000		
n310	n1		
t311	ms1000		
n311	n1		
}			

H.2.5 System information blocks message contents exceptions for RRC Re-establishment

SystemInformationBlockType2: (FDD/TDD) for E-UTRAN Intra-frequency RRC Re-establishment

Table H.2.5-1: SystemInformationBlockType2: E-UTRAN FDD Intra-frequency RRC Re-e stablishment

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-1 SystemInformationBlockType2				
Information Element	Value/remark	Comment	Condition	
SystemInformationBlockType 2 ::= SEQUENCE {				
ue-Timers And Constants {				
t310	ms0			
t311	ms3000			
n310	n1			
n311	n1			

SystemInformationBlockType2: (FDD/TDD) for E-UTRAN Inter-frequency RRC Re-establishment

Table H.2.5-2: SystemInformationBlockType2: E-UTRAN FDD Inter-frequency RRC Re-e stablishment

Derivation Path: TS 36.508 [7] clause 4.4.3.3, Table 4.4.3.3-1 SystemInformationBlockType2			
Information Element	Value/remark	Comment	Condition
SystemInformationBlockType 2 ::= SEQUENCE {			
ue-Timers And Constants {			
t310	ms0		
t311	ms5000		
n310	n1		
n311	n1		

H.2.6 System information block messages and information elements contents exceptions for E-UTRAN Random Access

SystemInformationBlockType1: (FDD/TDD) for E-UTRAN random access

Table H.2.6-1: SystemInformationBlockType1: E-UTRAN FDD/TDD - Contention and Non-Contention Based Random Access

Derivation Path: TS 36.508 [7] clause 4.4.3.2, Table 4.4.3.2-3 SystemInformationBlockType1			
Information Element Value/remark Comment Co			
SystemInformationBlockType1 ::= SEQUENCE {			
p-Max	23 (dBm)		

RACH-ConfigCommon-DEFAULT: (FDD/TDD) for E-UTRAN random access

Table H.2.6-2: RACH-ConfigCommon-DEFAULT: E-UTRAN FDD/TDD - Contention and Non-Contention Based Random Access

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-12 RACH-ConfigCommon-DEFAULT				
Information Element	Value/remark	Comment	Condition	
RACH-ConfigCommon-DEFAULT ::= SEQUENCE {				
preambleInfo SEQUENCE {				
numberOfRA-Preambles	n52			
preambles Group AConfig SEQUENCE {}	Not present			
}				
powerRampingParameters SEQUENCE {				
powerRampingStep	dB2			
preambleInitialReceivedTargetPower	dBm-120			
}				

PDSCH-ConfigCommon-DEFAULT: (FDD/TDD) for E-UTRAN random access

Table H.2.6-3: PDSCH-ConfigCommon-DEFAULT: E-UTRAN FDD/TDD - Contention and Non-Contention Based Random Access

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-5 PDSCH-ConfigCommon-DEFAULT				
Information Element Value/remark Comment Condition				
PDSCH-ConfigCommon-DEFAULT ::= SEQUENCE {				
referenceSignalPower	-5 (dBm)		1TX	

H.3 Default RRC messages and information elements contents exceptions

This clause contains the default values of common sRRC messages and information elements, other than those described in TS 36.508 [7].

H.3.1 RRC messages and information elements contents exceptions for E-UTRAN measurement configuration

RRCConnectionReconfiguration: (FDD/TDD) to setup E-UTRAN Measurement Configuration

Table H.3.1-1: RRCConnectionReconfiguration: E-UTRAN Measurement Configuration

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-8 RRCConnectionReconfiguration				
Information Element	Value/remark	Comment	Condition	
RRCConnectionReconfiguration ::= SEQUENCE {				
rrc-TransactionIdentifier	RRC-			
	TransactionIdentifier-DL			
criticalExtensions CHOICE {				
c1 CHOICE{				
rrcConnectionReconfiguration-r8 SEQUENCE {				
measConfig				
}	MeasConfig -DEFAULT		MEAS	
}				
}				
}				

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for intra frequency measurement

Table H.3.1-2: MeasConfig-DEFAULT: E-UTRAN intra frequency measurement configuration

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {	value/reiliaik	Comment	Condition
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	1 entry		
(1maxObjectId)) OF SEQUENCE {	i entry		
meas ObjectId	IdMeasObject-f1	f1 is the frequency of the serving cell	
measObject CHOICE {			
Meas ObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-A3		
reportConfig	ReportConfigEUTRA-A3		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measld	1		
meas ObjectId	IdMeasObject-f1		
reportConfigld	idReportConfig-A3		
}			
quantityConfig	QuantityConfig- DEFAULT		
meas GapConfig	Not present		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for inter frequency handover

Table H.3.1-3: *MeasConfig-DEFAULT*: E-UTRAN inter frequency measurement configuration for inter frequency handover

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	1.6.6-1 MeasConfig-DEFAULT		
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {		f1 is the frequency	
		of the serving cell	
m eas ObjectId	IdMeasObject-f1		
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeas Object-f2	f2 is the frequency of the neighbouring cell(inter frequency cell)	
measObject CHOICE {			
Meas ÓbjectEUTRA `	MeasObjectEUTRA- GENERIC(f2)	inter frequency cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigId))OF SEQUENCE {			
reportConfigId	idReportConfig-A3		
reportConfig	ReportConfigEUTRA-A3		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measId	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	idReportConfig-A3		
}			
quantityConfig	QuantityConfig- DEFAULT		
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}	'		

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for E-UTRAN to UTRAN cell search

Table H.3.1-4: MeasConfig-DEFAULT: interRAT UTRAN measurement configuration for E-UTRAN to UTRAN cell search

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAULT	:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
meas ObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f1	f1 is the frequency	
		of the serving cell	
		(E-UTRA Cell)	
measObject CHOICE {			
Meas ObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f2	f2 is the frequency	
•		of the	
		neighbouring	
		cell(UTRA Cell)	
measObject CHOICE {			
meas ObjectUTRA	MeasObjectUTRA- GENERIC(f2)	UTRA Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigld))OF SEQUENCE {			
reportConfigId	idReportConfig-B1		
reportConfig	ReportConfigInterRAT-		
•	B1-UTRA		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {			
measld	1		
meas ObjectId	ldMeasObject-f2		
reportConfigld	idReportConfig-B1		
}			
quantityConfig	QuantityConfig- DEFAULT		UTRAN
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for E-UTRAN to UTRAN handover

Table H.3.1-5: *MeasConfig-DEFAULT*: interRAT UTRAN measurement configuration for E-UTRAN to UTRAN handover

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAULT	· · · · · · · · · · · · · · · · · · ·	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	IdMeasObject-f1	f1 is the frequency of the serving cell(E-UTRA Cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeas Object-f2	f2 is the frequency of the neighbouring cell(UTRA Cell)	
measObject CHOICE {			
meas ObjectUTRA	MeasObjectUTRA- GENERIC(f2)	UTRA Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	1 entry		
reportConfigId	idReportConfig-B2		
reportConfig	ReportConfigInterRAT- B2-UTRA		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) OF SEQUENCE {	1 entry		
measId	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	ldReportConfig-B2		
}	0 "		
quantityConfig	QuantityConfig- DEFAULT		UTRAN
m eas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for E-UTRAN to GSM handover

Table H.3.1-6: *MeasConfig-DEFAULT*: interRAT GSM measurement configuration for E-UTRAN to GSM handover

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAULT	:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f1	f1 is the frequency	
•	1	of the serving	
		cell(E-UTRA Cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA-	E-UTRA Cell	
•	GENERIC(f1)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f2	f2 is the frequency	
,	•	of the	
		neighbouring	
		cell(GERAN Cell)	
measObject CHOICE {			
meas ÓbjectGERAN `	MeasObjectGERAN-	GERAN Cell	
•	GENERIC(f2)		
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigld))OF SEQUENCE {			
reportConfigId	idReportConfig-B1		
reportConfig	ReportConfigInterRAT-		
	B1-GERAN		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {	_		
measld	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	idReportConfig-B1		
}			
quantityConfig	QuantityConfig-		GERAN
	DEFAULT		
meas GapConfig	MeasGapConfig-GP1		Gap
			Pattern Id
			= 0
	MeasGapConfig-GP2		Gap
	weas Gap Config-GP2		
	WeasGapConfig-GP2		Pattern Id
	weas GapConiig-GP2		Pattern Id = 1
s-Measure	Not present		
	Not present		
s-Measure preRegistrationInfoHRPD speedStatePars			

QuantityConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for L3 filtering is not used

Table H.3.1-7: QuantityConfig-DEFAULT: measurement configuration for L3 filtering is not used

Derivation Path: TS 36.508 [7] clause 4.6.6, Table		ULT	
Information Element	Value/remark	Comment	Condition
QuantityConfig-DEFAULT ::= SEQUENCE {			
quantityConfigEUTRA SEQUENCE {			
filterCoefficientRSRP	fc0		
filterCoefficientRSRQ	fc0		
}			
quantityConfigUTRA SEQUENCE {}	Not present		
quantityConfigUTRA SEQUENCE {			UTRAN
measQuantityUTRA-FDD	cpich-EcN0		
measQuantityUTRA-TDD	pccpch-RSCP		
filterCoefficient	fc0		
}			
quantityConfigGERAN SEQUENCE {}	Not present		
quantityConfigGERAN SEQUENCE {			GERAN
meas Quantity GERAN	rssi		
filterCoefficient	fc0		
}			
quantityConfigCDMA2000 SEQUENCE {}	Not present		
quantityConfigCDMA2000 SEQUENCE {			CDMA2000
measQuantityCDMA2000	pilotStrength		
}			
}			

Condition	Explanation
UTRAN	For inter-RAT measurements with UTRAN
GERAN	For inter-RAT measurements with GERAN
CDMA2000	For inter-RAT measurements with CDMA2000

Table H.3.1-8: *MeasConfig-DEFAULT*: interRAT HRPD measurement configuration for E-UTRAN to HRPD handover

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4			
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	2 entry		
MeasObjectToAddMod SEQUENCE {	-		
meas ObjectId	ldMeasObject-f1	f1 is the frequency of the serving cell(E-UTRA Cell)	
measObject CHOICE {			
measObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f2	f2 is the frequency of the neighbouring cell(CDMA2000 Cell)	
measObject CHOICE {			
meas ObjectCDMA2000	MeasObjectCDMA2000	CDMA2000 Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId)) OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-B2		
reportConfig	ReportConfigInterRAT- B2-CDMA2000		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) OF SEQUENCE {	1 entry		
measId	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	IdReportConfig-B2		
<u> </u>	0 "0 "		ODIMAGGGG
quantityConfig	QuantityConfig- DEFAULT		CDMA2000
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for inter frequency measurement

Table H.3.1-9: MeasConfig-DEFAULT: E-UTRAN inter frequency measurement configuration

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	I.6.6-1 MeasConfig-DEFAULT:		
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	2 entry		
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f1	f1 is the frequency of the serving cell	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeas Object-f2	f2 is the frequency of the neighbouring cell(inter frequency cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f2)	inter frequency cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-A3		
reportConfig	ReportConfigEUTRA-A3		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measld	1		
meas ObjectId	IdMeasObject-f2		
reportConfigld	idReportConfig-A3		
}			
quantityConfig	QuantityConfig-DEFAULT		
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}	r		

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement configuration for E-UTRAN to GSM cell search

Table H.3.1-10: MeasConfig-DEFAULT: interRAT GSM measurement configuration for E-UTRAN to GSM cell search

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT:			
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	7 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f1	f1 is the frequency	
		of the serving	
		cell(E-UTRA Cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA-	E-UTRA Cell	
	GENERIC(f1)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
measObjectId	IdMeasObject-f2	f2 is the frequency	
mode objectio	lawidad Object 12	of the	
		neighbouring	
		cell(GERAN Cell)	
measObject CHOICE {		3311(3217/11/3011)	
measObject Choice { measObjectGERAN	MeasObjectGERAN-	GERAN Cell	
meas Objection IVAIN	GENERIC(f2)	GEIVAN CEII	
1	GENERIO(IZ)		
J			
Managoria atta AdalMand OFOLIENIOE (
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f3	f3 is the frequency	
		of the	
		neighbouring	
		cell(GERAN Cell)	
measObject CHOICE {			
meas ObjectGERAN	MeasObjectGERAN-	GERAN Cell	
	GENERIC(f3)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	IdMeasObject-f4	f4 is the frequency	
		of the	
		neighbouring	
		cell(GERAN Cell)	
measObject CHOICE {			
meas ObjectGERAN	MeasObjectGERAN-	GERAN Cell	
	GENERIC(f4)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeasObject-f5	f5 is the frequency	
		of the	
		neighbouring	
		cell(GERAN Cell)	
measObject CHOICE {	1	()	
meas Object GERAN	MeasObjectGERAN-	GERAN Cell	
000 00,000001 17 11	GENERIC(f5)	2210110011	
}	02.12.1.3(10)		
}			
MeasObjectToAddMod SEQUENCE {			
	IdMoog Object #6	f6 in the fragues as:	
meas ObjectId	IdMeasObject-f6	f6 is the frequency	
		of the	
		neighbouring	
01: 4.0110105.4		cell(GERAN Cell)	
measObject CHOICE {	1		l

m eas ObjectGERAN	MeasObjectGERAN- GENERIC(f6)	GERAN Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeas Object-f7	f7 is the frequency of the neighbouring cell(GERAN Cell)	
measObject CHOICE {			
m eas ÓbjectGERAN	MeasObjectGERAN- GENERIC(f7)	GERAN Cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigId	idReportConfig-B1		
reportConfig	ReportConfigInterRAT- B1-GERAN		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	1 entry		
measld	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	idReportConfig-B1		
}			
quantityConfig	QuantityConfig- DEFAULT		GERAN
meas GapConfig	Meas Gap Config-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig-DEFAULT (FDD/TDD) E-UTRAN measurement periodical configuration for E-UTRAN to GSM cell search

Table H.3.1-11: MeasConfig-DEFAULT: interRAT GSM measurement periodical configuration for E-UTRAN to GSM cell search

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	4.6.6-1 MeasConfig-DEFAUL	T:	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
meas ObjectToRemoveList	Not present		
measObjectToAddModListSEQUENCE(SIZE	7 entry		
(1maxObjectId)) OF SEQUENCE {	-		
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	ldMeasObject-f1	f1 is the frequency of the serving cell(E-UTRA Cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)	E-UTRA Cell	
}			
Moon Object To Add Mod SEQUENCE (
MeasObjectToAddMod SEQUENCE { measObjectId	IdMeasObject-f2	f2 is the frequency	
measObject CHOICE {	Idivieas Object-12	f2 is the frequency of the neighbouring cell(GERAN Cell)	
measObjectGERAN	MeasObjectGERAN-	GERAN Cell	
ineasObjectGERAN	GENERIC(f2)	GERAN Cell	
}			
MeasObjectToAddMod SEQUENCE {			
meas ObjectId	IdMeas Object-f3	f3 is the frequency of the neighbouring cell(GERAN Cell)	
measObject CHOICE {		OED AN O	
meas ObjectGERAN	MeasObjectGERAN- GENERIC(f3)	GERAN Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	IdMeasObject-f4	f4 is the frequency of the neighbouring cell(GERAN Cell)	
measObject CHOICE {			
meas ObjectGERAN	MeasObjectGERAN- GENERIC(f4)	GERAN Cell	
}			
MeasObjectToAddMod SEQUENCE {		+	
meas ObjectId	IdMeasObject-f5	f5 is the frequency of the neighbouring cell(GERAN Cell)	
measObject CHOICE {		,,	
m eas ÓbjectGERAN .	MeasObjectGERAN- GENERIC(f5)	GERAN Cell	
}			
Mana ObjectTo Add Mad OFOUTNOE (
MeasObjectToAddMod SEQUENCE {	IdMoogObject f6	f6 in the fragues are	
meas ObjectId	IdMeas Object-f6	f6 is the frequency of the neighbouring cell(GERAN Cell)	

measObject CHOICE {			
m eas ObjectGERAN	MeasObjectGERAN- GENERIC(f6)	GERAN Cell	
}			
}			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	IdMeasObject-f7	f7 is the frequency of the neighbouring cell(GERAN Cell)	
measObject CHOICE {			
meas ObjectGERAN	MeasObjectGERAN- GENERIC(f7)	GERAN Cell	
}			
]			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE	1 entry		
(1maxReportConfigld))OF SEQUENCE {			
reportConfigld	idReportConfig-P		
reportConfig	ReportConfigInterRAT- PERIODICAL		
) 	N. d		
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {	2 entry		
measIdToAddMod ::= SEQUENCE {			
measld	1		
meas ObjectId	IdMeasObject-f2		
reportConfigId	idReportConfig-P		
}			
measIdToAddMod ::= SEQUENCE {			
measid	2		
meas ObjectId	IdMeasObject-f3		
reportConfigld	idReportConfig-P		
}			
quantityConfig	QuantityConfig-		GERAN
	DEFAULT		
meas GapConfig	MeasGapConfig-GP1		Gap Pattern Id = 0
	Meas Gap Config-GP2		Gap Pattern Id = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

H.3.2 RRC messages and information elements contents exceptions for E-UTRAN cell re-selection and handover

PRACH-Config-DEFAULT: (FDD) for cell re-selection and handover

Table H.3.2-1: PRACH-Config-DEFAULT: E-UTRAN FDD cell re-selection and handover

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-7 PRACH-Config-DEFAULT				
Information Element	Value/remark	Comment	Condition	
PRACH-ConfigInfo SEQUENCE {				
prach-ConfigIndex	4			

PRACH-Config-DEFAULT: (TDD) for cell re-selection and intra frequency / inter frequency handover

Table H.3.2-2: PRACH-Config-DEFAULT: E-UTRAN TDD cell re-selection and handover

Derivation Path: TS 36.508 [7] clause 4.6.3, Table 4.6.3-7 PRACH-Config-DEFAULT				
Information Element	Value/remark	Comment	Condition	
PRACH-ConfigInfo SEQUENCE {				
prach-ConfigIndex	53			

RRCConnectionReconfiguration: (FDD/TDD) for intra-frequency / inter-frequency handover

Table H.3.2-3: RRCConnectionReconfiguration: E-UTRAN handover Configuration

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-8 RRCConnectionReconfiguration				
Information Element	Value/remark	Comment	Condition	
RRCConnectionReconfiguration ::= SEQUENCE {				
rrc-TransactionIdentifier	RRC-			
	TransactionIdentifier-DL			
criticalExtensions CHOICE {				
c1 CHOICE{				
rrcConnectionReconfiguration-r8 SEQUENCE {				
mobilityControlInfo				
}	MobilityControlInfo-HO		НО	
}				
}				
}				

H.3.3 RRC messages and information elements contents exceptions for E-UTRAN inter-RAT handover

Handover: (FDD/TDD) to perform Inter-RAT E-UTRAN - UTRAN handover

Table H.3.3-1: Handover: Inter-RAT E-UTRAN - UTRAN handover

Derivation Path: 36.331 clause 6.2.2				
Information Element	Value/remark	Comment	Condition	
Handover ::= SEQUENCE {				
targetRAT-Type	utra	ENUMERATED {utra, geran, cdma2000-1XTT, cdma2000-HRPD, spare4, spare3, spare2, spare1,}		
targetRAT-MessageContainer		OCTET STRING		
nas-SecurityParamFromEUTRA }		OCTET STRING(SIZE (1))	UTRAGERA N	

Handover: (FDD/TDD) to perform Inter-RAT E-UTRAN - GSM handover

Table H.3.3-2: Handover: Inter-RAT E-UTRAN - GSM handover

Derivation Path: 36.331 clause 6.2.2				
Information Element	Value/remark	Comment Con	dition	
Handover ::= SEQUENCE {				
targetRAT-Type	geran	ENUMERATED {utran, geran, cdma2000-1XTT, cdma2000-HRPD, spare4, spare3, spare2, spare1,}		
targetRAT-MessageContainer		OCTET STRING		
nas-SecurityParamFromEUTRA		OCTET UTF STRING(SIZE (1)) N	RAGERA	
}				

MobilityFromEUTRACommand: (FDD/TDD) to setup Inter-RAT E-UTRAN handover

Table H.3.3-3: MobilityFromEUTRA Command: Inter-RAT E-UTRAN handover

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-6 MobilityFrom EUTRACommand				
Information Element	Value/remark	Comment	Condition	
MobilityFromEUTRACommand ::= SEQUENCE {				
rrc-TransactionIdentifier	RRC-			
	TransactionIdentifier-DL			
criticalExtensions CHOICE {				
c1 CHOICE {				
mobilityFromEUTRACommand-r8 SEQUENCE {				
csFallbackIndicator	FALSE			
purpose CHOICE {				
Handover	Handover			
}				
nonCriticalExtension SEQUENCE {}	Not present			
nonCriticalExtension SEQUENCE {			GERAN	
lateNonCriticalExtension	Not present			
nonCriticalExtension SEQUENCE {				
bandIndicator		ENUMERATED {dcs1800, pcs1900}		
nonCriticalExtension SEQUENCE {}	Not present			
}				
}				
}				
}				
}				
}				

Condition	Explanation
GERAN	The field should be present if the <i>purpose</i> is set to "handover" and the targetRAT-Type is set
	to "geran"; otherwise the field is not present

Handover: (FDD/TDD) to perform Inter-RAT E-UTRAN - HRPD handover

Table H.3.3-4: Handover: Inter-RAT E-UTRAN - HRPD handover

Derivation Path: 36.331 clause 6.2.2				
Information Element	Value/remark	Comment	Condition	
Handover ::= SEQUENCE {				
targetRAT-Type	cdma2000-HRPD	ENUMERATED		
		{utran, geran,		
		cdma2000-1XTT,		
		cdma2000-HRPD,		
		spare4, spare3,		
		spare2, spare1,}		

H.3.4 RRC messages and information elements exceptions for E-UTRAN UE transmit timing accuracy and UE timing advance adjustment accuracy

RRCConnectionReconfiguration: (FDD/TDD) to establish E-UTRAN Radio Resource Configuration

Table H.3.4-1: RRCConnectionReconfiguration: E-UTRAN Radio Resource Configuration

Derivation Path: TS 36.508 [7] clause 4.6.1, Table 4.6.1-8 RRCConnectionReconfiguration			
Information Element	Value/remark	Comment	Condition
RRCConnectionReconfiguration ::= SEQUENCE {			
Rrc-TransactionIdentifier	RRC-		
	TransactionIdentifier-DL		
criticalExtensions CHOICE {			
C1 CHOICE{			
rrcConnectionReconfiguration-r8 SEQUENCE {			
radioResourceConfigDedicated			
	RadioResourceConfigDed		НО-ТО-
	icated-HO-TO-		EUTRA(n,m)
	EUTRA(n,m)		

PhysicalConfigDedicated-DEFAULT: (FDD/TDD) for E-UTRAN Physical Configuration

Table H.3.4-2: PhysicalConfigDedicated-DEFAULT: E-UTRAN Physical Configuration

Derivation Path: TS 36.508 [7] clause 4.8.21.6, Table 4.8.2.1.6-1 PhysicalConfigDedicated-DEFAULT				
Information Element	Value/remark	Comment	Condition	
PhysicalConfigDedicated-DEFAULT ::= SEQUENCE				
\ {				
soundingRS-UL-ConfigDedicated			SRB1	
	SoundingRS-UL-		RBC	
	ConfigDedicated-			
	DEFAULT			
antennalnformation CHOICE {				
defaultValue	NULL			
}				
schedulingRequestConfig	Not present		SRB1	

H.3.5 RRC messages and information elements contents exceptions for E-UTRAN RSRP and RSRQ Accuracy

MeasConfig: (FDD/TDD) to perform Measurement Configuration for E-UTRAN intra frequency RSRP and RSRQ accuracy

Table H.3.5-1: MeasConfig-DEFAULT: E-UTRAN intra frequency RSRP and RSRQ Accuracy

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {	value/remark	Comment	Condition
	Notareaset		
measObjectToRemoveList	Not present		
meas ObjectToAddModList SEQUENCE (SIZE	1 entry		
(1maxObjectId)) OF SEQUENCE {	Lall According to the second	Main the formula and	
meas ObjectId	IdMeasObject-f1	f1 is the frequency of the serving cell	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-P		
reportConfig	ReportConfigEUTRA-		
	PERIODICAL		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE (1maxMeasId)) of SEQUENCE {			
measld	1		
meas ObjectId	ldMeasObject-f1		
reportConfigId	idReportConfig-P		
}			
quantityConfig	QuantityConfig-DEFAULT		
meas GapConfig	Not present		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

MeasConfig: (FDD/TDD) perform Measurement Configuration for E-UTRAN inter frequency RSRP and RSRQ accuracy

Table H.3.5-2: MeasConfig-DEFAULT: E-UTRAN inter frequency RSRP and RSRQ Accuracy

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAULT		
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entry		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	IdMeasObject-f1	f1 is the frequency of the serving cell	
measObject CHOICE {			
Meas ObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
MeasObjectToAddMod SEQUENCE {			
m eas ObjectId	ldMeasObject-f2	f2 is the frequency of the neighbouring cell (inter frequency cell)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f2)	inter frequency cell	
}			
}			
}			
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-P		
reportConfig	ReportConfigEUTRA-		
Toportooning	PERIODICAL		
}			
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {			
measld	1		
meas ObjectId	IdMeasObject-f2		
reportConfigld	idReportConfig-P		
}			
quantityConfig	QuantityConfig-DEFAULT		
meas GapConfig	Meas Gap Config-GP1		Gap Pattern ld = 0
	Meas Gap Config-GP2		Gap Pattern ld = 1
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

ReportConfigEUTRA-PEROIDICAL: (FDD/TDD) for periodical configuration reporting of E-UTRAN RSRP accuracy

Table H.3.5-3: ReportConfigEUTRA-PERIODICAL: E-UTRAN RSRP Accuracy

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-7 ReportConfigEUTRA-PERIODICAL				
Information Element	Value/remark	Comment	Condition	
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {				
triggerType CHOICE {				
periodical SEQUENCE {				
purpose	reportStrongestCells			
}				
}				
triggerQuantity	rsrp			
reportQuantity	sameAsTriggerQuantity			
maxReportCells	1			
reportInterval	ms 1024 (1024 ms)			
reportAmount	Infinity			
}				

ReportConfigEUTRA-PEROIDICAL: (FDD/TDD) for periodical configuration reporting of E-UTRAN RSRQ accuracy

Table H.3.5-4: ReportConfigEUTRA-PERIODICAL: E-UTRAN RSRQ Accuracy

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-7 ReportConfigEUTRA-PERIODICAL				
Information Element	Value/remark	Comment	Condition	
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {				
triggerType CHOICE {				
periodical SEQUENCE {				
purpose	reportStrongestCells			
}				
}				
triggerQuantity	rsrq			
	sameAsTriggerQuantity			
maxReportCells	1			
reportInterval	ms 1024 (1024 ms)			
reportAmount	Infinity			
}				

H.3.6 RRC messages and information elements contents exceptions for E-UTRAN inter frequency handover and E-UTRAN intra frequency cell search

MAC-MainConfig-RBC: (FDD/TDD) to perform DRX Configuration for E-UTRAN - inter-frequency handover and E-UTRAN intra-frequency cell search with DRX_S

Table H.3.6-1: MAC-MainConfig-RBC: E-UTRAN inter frequency handover and E-UTRAN intra frequency cell search with DRX_S

Derivation Path: TS 36.508 [7] clause 4.8.2.1.5, Table 4.8.2.1.6-1 MAC-MainConfig-RBC			
Information Element	Value/remark	Comment	Condition
MAC-MainConfig-RBC ::= SEQUENCE {			
ul-SCH-Config SEQUENCE {			
maxHARQ-Tx	n5		
periodicBSR-Timer	sf20		
retxBSR-Timer	sf1280		
ttiBundling	FALSE		
}			
drx-Config CHOICE {			DRX_S
setup SEQUENCE {			
onDurationTimer	psf2		
drx-InactivityTimer	psf100		
drx-RetransmissionTimer	psf16		
longDRX-CycleStartOffset CHOICE {		sf40 typical value in real network for best-effort services.	
sf40	0		
}			
shortDRX	Not present		
}			
}			
}			

MAC-MainConfig-RBC: (FDD/TDD) to perform DRX Configuration for E-UTRAN - inter-frequency handover and E-UTRAN intra-frequency cell search with DRX_L

Table H.3.6-2: MAC-MainConfig-RBC: E-UTRAN inter frequency handover and E-UTRAN intra frequency cell search with DRX_L

Information Element	Value/remark	Comment	Condition
MAC-MainConfig-RBC ::= SEQUENCE {			
ul-SCH-Config SEQUENCE {			
maxHARQ-Tx	n5		
periodicBSR-Timer	sf20		
retxBSR-Timer	sf1280		
ttiBundling	FALSE		
}			
drx-Config CHOICE {			DRX_L
Setup SEQUENCE {			
onDurationTimer	psf6		
drx-InactivityTimer	psf1920		
drx-RetransmissionTimer	psf16		
longDRX-CycleStartOffset CHOICE {		sf1280 typical value in real network for best- effort services.	
sf1280	0		
}			
shortDRX	Not present		
}			
}			
}			

H.3.7 RRC messages and information elements contents exceptions for E-UTRAN inter frequency and E-UTRAN inter-RAT cell search when DRX is used

MAC-MainConfig-RBC: (FDD/TDD) to perform DRX Configuration for E-UTRAN - inter-frequency and E-UTRAN inter-RAT cell search when DRX = 40 ms

Table H.3.7-1: MAC-MainConfig-RBC: E-UTRAN inter frequency cell search and E-UTRAN intra frequency cell search when DRX = 40 ms

Derivation Path: TS 36.508 [7] clause 4.8.2.1.5, Table 4.8.2.1.6-1 MAC-MainConfig-RBC			
Information Element	Value/remark	Comment	Condition
MAC-MainConfig-RBC ::= SEQUENCE {			
ul-SCH-Config SEQUENCE {			
maxHARQ-Tx	n5		
periodicBSR-Timer	sf20		
retxBSR-Timer	sf1280		
ttiBundling	FALSE		
}			
drx-Config CHOICE {			
Setup SEQUENCE {			
onDurationTimer	psf1		
drx-InactivityTimer	psf1		
drx-RetransmissionTimer	psf1		
longDRX-CycleStartOffset CHOICE {		sf40 typical value in real network for real-time services.	
sf40	9	To avoid overlapping with measurement gap.	
}			
shortDRX	Not present		
}	-		
}			
timeAlignmentTimerDedicated	sf500		
}			

MAC-MainConfig-RBC: (FDD/TDD) to perform DRX Configuration for E-UTRAN - inter-frequency and E-UTRAN inter-RAT cell search when DRX = 1280 ms

Table H.3.7-2: MAC-MainConfig-RBC: E-UTRAN inter frequency and E-UTRAN inter-RAT cell search when DRX = 1280 ms

Derivation Path: TS 36.508 [7] clause 4.8.2.1.5, Information Element	Value/remark	Comment	Condition
MAC-MainConfig-RBC ::= SEQUENCE {	value// email	- Commone	Contaction
ul-SCH-Config SEQUENCE {			
maxHARQ-Tx	n5		
periodicBSR-Timer	sf20		
retxBSR-Timer	sf1280		
ttiBundling	FALSE		
}			
drx-Config CHOICE {			
Setup SEQUENCE {			
onDurationTimer	psf1		
drx-InactivityTimer	psf1		
drx-RetransmissionTimer	psf1		
longDRX-CycleStartOffset CHOICE {		sf1280 typical value in real	
		network for best-	
		effort services.	
sf1280	9	To avoid	
		overlapping with	
		measurement	
		gap.	
}			
shortDRX	Not present		
}			
}			
timeAlignmentTimerDedicated	sf500		

PhysicalConfigDedicated-DEFAULT: (FDD/TDD) to perform DRX Configuration for E-UTRAN - interfrequency and E-UTRAN inter-RAT cell search

Table H.3.7-3: *PhysicalConfigDedicated-DEFAULT*: E-UTRAN inter frequency and E-UTRAN inter-RAT cell search

Derivation Path: TS 36.508 [7] clause 4.8.2.1.6, Table 4.8.2.1.6-1 PhysicalConfigDedicated-DEFAULT			
Information Element	Value/remark	Comment	Condition
PhysicalConfigDedicated-DEFAULT ::= SEQUENCE {			
schedulingRequestConfig	SchedulingRequest-		
	Config-DEFAULT		
}			

H.4 Default RRC messages and information elements contents exceptions for Carrier Aggregation

This clause contains the default values of common RRC messages and information elements for Carrier Aggregation, other than those described in TS 36.508 [7].

H.4.1 RRC messages and information elements contents exceptions for E-UTRAN measurement configuration for CA

RRCConnectionReconfiguration: (FDD/TDD) to setup E-UTRAN Measurement Configuration for CA

Table H.4.1-1: Void

MeasConfig-DEFAULT: (FDD/TDD) E-UTRAN Measurement Configuration for Event Triggered Reporting for

Table H.4.1-2: MeasConfig-DEFAULT: E-UTRAN Measurement Configuration for CA

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-1 MeasConfig-DEFAULT			
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE	2 entries		
(1maxObjectId)) OF SEQUENCE {			
MeasObjectToAddMod[1] SEQUENCE {			
measObjectId	IdMeasObject-f1	f1 is the frequency	
		of the PCell (Cell 1)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA-		
	GENERIC(f1)		
}			
}			
MeasObjectToAddMod[2] SEQUENCE {			
m eas ObjectId	IdMeasObject-f2	f2 is the frequency	
		of the SCell on the	
		SCC (Cell 2)and	
		neighbouring cell	
01: (01005 (on the SCC (Cell 3)	
measObject CHOICE {	M OI : (ELITE)		
MeasObjectEUTRA	MeasObjectEUTRA-		
1	GENERIC(f2)		
}			
}			
you and Confin Ta Dama avail in t	Notareacat		
reportConfigToRemoveList reportConfigToAddModList SEQUENCE (SIZE	Not present 1 entry		
(1maxReportConfigId))OF SEQUENCE {	rentry		
reportConfigld	idReportConfig-A6		
reportConfig	ReportConfigEUTRA-A6		
teponconing	ReportCornigEo FRA-Ao		
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		
(1maxMeasId)) of SEQUENCE {	rentry		
measId	1		
meas ObjectId	IdMeasObject-f2		
reportConfigld	idReportConfig-A6		
}	is toportooning / to		
quantityConfig	QuantityConfig-DEFAULT		
measGapConfig	Not present		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			
J.			

MeasObjectEUTRA-GENERIC: (FDD/TDD) E-UTRAN Measurement Configuration for Event Triggered Reporting for CA

Table H.4.1-3: MeasObjectEUTRA-GENERIC(Freq): E-UTRAN Measurement Configuration for CA with SCell measurement cycle 1280 ms)

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6	6-2 MeasObjectEUTRA-GEN	ERIC	
Information Element	Value/remark	Comment	Condition
MeasObjectEUTRA-GENERIC(Freq) ::= SEQUENCE			
{			
carrierFreq	Downlink EARFCN for		
	Freq		
allowedmeas Bandwidth	The number of the		
	resource blocks for Freq		
presenceAntennaPort1	FALSE		
neighbourCellConfig	'01'B (No MBSFN	MBSFN doesn't	TDD
	subframes are present in	apply by default.	
	all neighbour cells)		
	10'B (The MBSFN		FDD
	subframe allocations of		
	all neighbour cells are		
	identical to or subsets of		
	that in the serving cell)		
offsetFreq	0 (dB 0)		
cellsToRemoveList	Not present		
cellsToAddModList	Not present		
blackCellsToRemoveList	Not present		
blackCellsToAddModList	Not present		
cellForWhichToReportCGI	Not present		
measCycleSCell-r10	sf1280		
meas SubframePatternConfigNeigh-r10	Not present		
}		_	

Table H.4.1-4: Void

MeasurementReport: (FDD/TDD) E-UTRAN Measurement Report for CA

Table H.4.1-5: MeasurementReport: E-UTRAN Measurement Report for CA

Derivation path: 36.508 4.6.1 table 4.6.1-5			
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	1		
measResultPCell::= SEQUENCE {		PCell	
rsrpResult	(097)	Set according to specific test	
rsrqResult	(034)	Set according to specific test	
}		1,1111111111111111111111111111111111111	
measResultNeighCells CHOICE {			1
Meas ResultEUTRA ::= SEQUENCE (SIZE (1maxCellReport)) OF SEQUENCE {		Neighbour cell	
physCellId	physCellId of Cell 3		
cgi-Info	Not present		
meas Result SEQUENCE {			
rsrpResult	(097)	Set according to	
To price and	(8.187)	specific test	
rsrqResult	(034)	Set according to	
Torqittootiit	(8.18.1)	specific test	
}		opcomo tect	
}			
}			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE	140t present		
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		SCell	
rsrpResultSCell-r10	(097)	Set according to specific test	
rsrqResultSCell-r10	(034)	Set according to specific test	
}			1
}			1
}			1
}			
}			1
}			+

Report ConfigEUTRA-A6: (FDD/TDD) E-UTRAN Measurement Report Configuration for Event A6 for CA

Table H.4.1-6: ReportConfig-A6: E-UTRAN Report config for Event A6 for CA

Information Element	Value/remark	Comment	Condition
ReportConfigEUTRA-A6 ::= SEQUENCE {			
triggerType CHOICE {			
event SEQUENCE {			
e ventld CHOICE {			
eventA6-r10 SEQUENCE {			
a6-Offset-r10	-6 (-3 dB)	-3 is actual value in dB (-6 * 0.5 dB)	A6-Offset = -3dB
	-12 (-6 dB)	-6 is actual value in dB (-12 * 0.5 dB)	A6-Offset = -6dB
a6-ReportOnLeave-r10	FALSE	·	
}			
}			
Hysteresis	0 (0 dB)	0 is actual value in dB (0 * 0.5 dB)	
timeToTrigger	ms0		
}			
}			
triggerQuantity	rsrp		
reportQuantity	both		
maxReportCells	1		
reportInterval	ms5120		
reportAmount	r1		

H.4.2 RRC messages and information elements contents exceptions for E-UTRAN RSRP and RSRQ Accuracy for CA

MeasConfig: (FDD/TDD) to perform Measurement Configuration for E-UTRAN RSRP and RSRQ accuracy for CA

Table H.4.2-1: MeasConfig-DEFAULT: E-UTRAN RSRP and RSRQ Accuracy for CA

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4	.6.6-1 MeasConfig-DEFAULT	Ţ	
Information Element	Value/remark	Comment	Condition
MeasConfig-DEFAULT ::= SEQUENCE {			
measObjectToRemoveList	Not present		
measObjectToAddModList SEQUENCE (SIZE (1maxObjectId)) OF SEQUENCE {	2 entries		
MeasObjectToAddMod[1] SEQUENCE {			
meas ObjectId	IdMeasObject-f1	f1 is the frequency of the PCell (Cell 1)	
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}		101 11	0 11
meas ObjectId	ldMeasObject-f2	f2 is the frequency of the PCell (Cell 1)	Sw itch PCeII/SCeII scenario
measObject CHOICE {			
MeasObjectEUTRA	MeasObjectEUTRA- GENERIC(f2)		
}			
Mara Object Table Mara Mod OF OUT TO COME			_
MeasObjectToAddMod[2] SEQUENCE {	Jal Mana Ohi a at 10	fo in the factories	ļ
meas ObjectId	ldMeasObject-f2	f2 is the frequency of the SCell on the SCC (Cell 2) and neighbouring cell on the SCC(Cell 3)	
measObject CHOICE {			
MeasÓbjectEUTRA	MeasObjectEUTRA-		
	GENERIC(f2)		
}			
m eas ObjectId	ldMeasObject-f1	f1 is the frequency of the SCell on the SCC (Cell 2) and neighbouring cell on the SCC(Cell 3)	Sw itch PCell/SCell scenario
measObject CHOICE {			1
Meas ObjectEUTRA	MeasObjectEUTRA- GENERIC(f1)		
}			
}			
}	Notarrange		
reportConfigToRemoveList	Not present		
reportConfigToAddModList SEQUENCE (SIZE (1maxReportConfigId))OF SEQUENCE {	1 entry		
reportConfigld	idReportConfig-P		1
reportConfig	ReportConfigEUTRA-		
Tepottooning	PERIODICAL		
measIdToRemoveList	Not present		
measIdToAddModList SEQUENCE (SIZE	1 entry		1
(1maxMeasId)) of SEQUENCE {	T GITTUY		
measIdToAddMod ::= SEQUENCE {	1		
measId	IdMana Ohi+ 40	f0 in the factories	
measObjectId	ldMeasObject-f2	f2 is the frequency	1

		of the SCell on the SCC (Cell 2) and neighbouring cell on the SCC (Cell 3)	
	ldMeasObject-f1	f1 is the frequency of the SCell on the SCC (Cell 2) and neighbouring cell on the SCC (Cell 3)	Sw itch PCell/SCell scenario
reportConfigld	idReportConfig-P		
}			
quantityConfig	QuantityConfig-DEFAULT		
measGapConfig	Not present		
s-Measure	Not present		
preRegistrationInfoHRPD	Not present		
speedStatePars	Not present		
}			

ReportConfigEUTRA-PEROIDICAL: (FDD/TDD) for periodical configuration reporting of E-UTRAN RSRP accuracy for CA

Table H.4.2-2: ReportConfigEUTRA-PERIODICAL: E-UTRAN RSRP Accuracy for CA

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-7 ReportConfigEUTRA-PERIODICAL				
Information Element	Value/remark	Comment	Condition	
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {				
triggerType CHOICE {				
periodical SEQUENCE {				
purpose	reportStrongestCells			
}				
}				
triggerQuantity	rsrp			
reportQuantity	sameAsTriggerQuantity			
maxReportCells	2			
reportInterval	ms 1024 (1024 ms)			
reportAmount	Infinity			
}				

ReportConfigEUTRA-PEROIDICAL: (FDD/TDD) for periodical configuration reporting of E-UTRAN RSRQ accuracy for CA

Table H.4.2-3: ReportConfigEUTRA-PERIODICAL: E-UTRAN RSRQ Accuracy for CA

Derivation Path: TS 36.508 [7] clause 4.6.6, Table 4.6.6-7 ReportConfigEUTRA-PERIODICAL					
Information Element	Value/remark	Comment	Condition		
ReportConfigEUTRA-PERIODICAL ::= SEQUENCE {					
triggerType CHOICE {					
periodical SEQUENCE {					
purpose	reportStrongestCells				
}					
}					
triggerQuantity	rsrq				
reportQuantity	sameAsTriggerQuantity				
maxReportCells	2				
reportInterval	ms 1024 (1024 ms)				
reportAmount	Infinity				
}					

MeasurementReport: (FDD/TDD) for periodical configuration reporting of E-UTRAN RSRP and RSRQ accuracy for CA

Table H.4.2-4: MeasurementReport: E-UTRAN RSRP and RSRQ Accuracy for CA

Derivation path: TS 36.508 [7] clause 4.6.1 Table 4.6.	.1-5 MeasurementReport		
Information Element	Value/Remark	Comment	Condition
MeasurementReport ::= SEQUENCE {			
criticalExtensions CHOICE {			
c1 CHOICE {			
measurementReport-r8 SEQUENCE {			
measResults ::= SEQUENCE {			
measld	1		
measResultPCell::= SEQUENCE {		PCell	
rsrpResult	(097)	Set according to	
		specific test	
rsrqResult	(034)	Set according to specific test	
}			
measResultNeighCells CHOICE {			
MeasResultEUTRA ::= SEQUENCE (SIZE			
(1maxCellReport)) OF SEQUENCE {			
Meas ResultEUTRA SEQUENCE {			
physCellId	physCellId of best Cell		
cgi-Info	Not present		
measResult SEQUENCE {			
rsrpResult	(097)	Set according to specific test	
rsrqResult	(034)	Set according to specific test	
}			
}			
Meas ResultEUTRA SEQUENCE {			
phys Cellid	phys CellId of 2nd best Cell		
cgi-Info	Not present		
measResult SEQUENCE {			
rsrpResult	(097)	Set according to specific test	
rsrqResult	(034)	Set according to specific test	
}		-	
}			
}			
}			
measResultForECID-r9	Not present		
locationInfo-r10	Not present		
measResultServFreqList-r10 SEQUENCE			
(SIZE (1maxServCell-r10)) OF SEQUENCE {			
servFreqld-r10	1		
measResultSCell-r10 SEQUENCE {		SCell	
rsrpResultSCell-r10	(097)	Set according to specific test	
rsrqResultSCell-r10	(034)	Set according to specific test	
}			
}			
}			
}			
}			
}			

Annex I (normative):

Conditions for RRM requirements applicability for operating bands

I.1 Conditions for E-UTRAN RRC_IDLE state mobility

I.1.1 Conditions for measurements of intra-frequency E-UTRAN cells for cell re-selection

This section defines the E-UTRAN intra-frequency RSRP, RSRP Ês/Iot, SCH_RP and SCH Ês/Iot applicable for a corresponding operating band.

The conditions for measurements of intra-frequency E-UTRAN cells for cell re-selection are defined in Table I.1.1-1

Table I.1.1-1: Conditions for measurements of intra-frequency E-UTRAN cells for cell re-selection

Parameter	E-UTRA operating bands	Minimum RSRP	Minimum SCH_RP	RSRP Ës/lot	SCH Ês/lot
		dBm/15kHz	dBm/15kHz	dB	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-124	-124		
	9, 42, 43	-123	-123		
Conditions	28	-122.5	-122.5		
	2, 5, 7, 27, 41, [44]	-122	-122	≥ -4	≥ -4
	26	-121.5 Note 2	-121.5 Note 2		
	3, 8, 12, 13, 14, 17, 20, 22	-121	-121		
	29 Note 3	-121	-121		
	25	-120.5	-120.5		

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the RSRP and SCH_RP measurement side conditions shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -122 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.1.2 Conditions for measurements of inter-frequency E-UTRAN cells for cell re-selection

This section defines the E-UTRAN inter-frequency RSRP, RSRP Ês/Iot, SCH_RP and SCH Ês/Iot applicable for a corresponding operating band.

The conditions for measurements of intra-frequency E-UTRAN cells for cell re-selection defined in Table I.1.1-1 also apply for inter-frequency E-UTRAN cells in this section.

I.2 Conditions for UE Measurements Procedures in RRC CONNECTED State

I.2.1 Conditions for E-UTRAN intra-frequency measurements

This section defines the E-UTRAN intra-frequency SCH_RP and SCH Ês/Iot applicable for a corresponding operating band

The conditions for intra-frequency E-UTRAN measurements are defined in Table I.2.1-1

Table I.2.1-1: E-UTRAN intra-frequency measurements

Doromotor	E-UTRA operating bands	Minimum SCH_RP	SCH Ës/lot
Parameter -		dBm/15kHz	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127	
	9, 42, 43	-126]
	28	-125.5	1
0	2, 5, 7, 27, 41, [44]	-125	
Conditions	26	-124.5 Note 2	≥ -6
	3, 8, 12, 13, 14, 17, 20, 22	-124	1
	29 Note 3	-124]
	25	-123.5	1

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the SCH_RP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.2.2 Conditions for E-UTRAN intra-frequency measurements with autonomous gaps

This section defines the E-UTRAN intra-frequency SCH_RP and SCH Ês/Iot applicable for a corresponding operating band

The conditions for intra-frequency E-UTRAN measurements with autonomous gap are defined in Table I.2.1-1

Table I.2.2-1: Void

I.2.3 Conditions for E-UTRAN inter-frequency measurements

This section defines the E-UTRAN inter-frequency SCH_RP, SCH Ês/Iot, RSRP and RSRP Ês/Iot applicable for a corresponding operating band

The conditions for inter-frequency E-UTRAN measurements with autonomous gap are defined in Table I.2.3-1

Table I.2.3-1: E-UTRAN inter-frequency measurements

Parameter	E-UTRA operating bands	Minimum RSRP	Minimum SCH_RP	RSRP Es/lot	SCH Ês/lot
		dBm/15kHz	dBm/15kHz	dB	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-125	-125		
	9, 42, 43	-124	-124	1	
Conditions	28	-123.5	-123.5	1	
	2, 5, 7, 27, 41, [44]	-123	-123	≥ -4	≥ -4
	26	-122.5 Note 2	-122.5 Note 2]	
	3, 8, 12, 13, 14, 17, 20, 22	-122	-122]	
	29 Note 3	-122	-122		
	25	-121.5	-121.5		

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the RSRP and SCH_RP measurement side conditions shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -123 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.2.4 Conditions for E-UTRAN inter-frequency measurements with autonomous gaps

This section defines the E-UTRAN inter-frequency SCH_RP and SCH Ês/Iot applicable for a corresponding operating band.

The conditions for inter-frequency E-UTRAN measurements with autonomous gap are defined in Table I.2.4-1.

Table I.2.4-1: E-UTRAN inter-frequency measurements with autonomous gaps

Parameter	E-UTRA operating bands	Minimum SCH_RP	SCH Ês/I ot
		dBm/15kHz	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-125	
	9, 42, 43	-124	
	28	-123.5	
Conditions	2, 5, 7, 27, 41, [44]	-123	≥ -4
	26	-122.5 Note 2	
	3, 8, 12, 13, 14, 17, 20, 22	-122	
	29 Note 3	-122	
	25	-121.5	

NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the SCH_RP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.

NOTE 2: The condition is -123 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.2.5 Conditions for E-UTRAN OTDOA intra-frequency RSTD Measurements

The conditions for E-UTRAN OTDOA intra-frequency RSTD Measurements can be found in Annex E in TS 37.571-1.

I.2.6 Conditions for E-UTRAN OTDOA inter-frequency RSTD Measurements

The conditions for E-UTRAN OTDOA inter-frequency RSTD Measurements can be found in Annex E in TS 37.571-1.

I.2.7 Conditions for Measurements of the secondary component carrier with deactivated SCell

This section defines the SCH_RP and SCH Ês/Iot for measurements in the secondary component carrier applicable for a corresponding operating band

The conditions for measurements of the secondary component carrier with deactivated SCell are defined in Table I.2.7-1.

Table I.2.7-1: Measurements of the secondary component carrier with deactivated SCell

Parameter	E-UTRA operating bands	Minimum SCH_RP	SCH Es/lot
rarameter		dBm/15kHz	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127	
	9, 42, 43	-126	
	28	-125.5	
Conditions 2, 5, 7, 27, 41, [44] 26 3, 8, 12, 13, 14, 17, 20, 22 29 Note 3	2, 5, 7, 27, 41, [44]	-125	
	-124.5 Note 2	≥ -6	
	3, 8, 12, 13, 14, 17, 20, 22	-124	
	29 Note 3	-124	
	25	-123.5	

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the SCH_RP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.2.8 Conditions for E-UTRAN Intra-Frequency Measurements under Time Domain Measurement Resource Restriction

This section defines the E-UTRAN intra-frequency SCH_RP and SCH Ês/Iot applicable for a corresponding operating band.

The conditions for intra-frequency E-UTRAN measurements under time domain measurement resource restriction are defined in Table I.2.8-1.

Table I.2.8-1 E-UTRAN intra-frequency measurements under time domain measurement resource restriction

Parameter	E-UTRA operating bands	Minimum SCH_RP	SCH Es/lot
Tarameter		dBm/15kHz	dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127	
	9, 42, 43	-126	
	28	-125.5	
Con ditions	2, 5, 7, 27, 41, [44]	-125	> 7.5
26 3, 8, 12, 13, 14, 17, 20, 22 29 Note 3	-124.5 Note 2	≥ -7.5	
		-124	
	29 ^{Note 3}	-124	
	25	-123.5	

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the SCH_RP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

I.2.9 Conditions for E-UTRAN Intra-Frequency Measurements under Time Domain Measurement Resource Restriction with CRS Assistance Information

This clause defines the E-UTRAN intra-frequency SCH_RP and SCH £s/Iot applicable for a corresponding operating band.

The conditions for intra-frequency E-UTRAN measurements under time domain measurement resource restriction with CRS assistance information are defined in Table B.2.9-1.

Parameter	E-UTRA operating bands	Minimum SCH_RP dBm/15kHz	SCH Es/lot dB
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127	
	9, 42, 43	-126	
	28	-125.5	
Conditions	2, 5, 7, 27, 41, 44	-125	≥ -11.07
	26	-124.5 Note 2	
	3, 8, 12, 13, 14, 17, 20, 22	-124	
	29 Note 3	-124	
	25	-123.5	

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the SCH_RP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

Table I.2.9-1: E-UTRAN intra-frequency measurements under time domain measurement resource restriction with CRS assistance information

I.3 Conditions for measurements performance requirements for UE

I.3.1 Conditions for intra-frequency RSRP and RSRQ Accuracy Requirements

This section defines the E-UTRAN intra-frequency RSRP applicable for a corresponding operating band.

The conditions for intra-frequency absolute RSRP and RSRQ accuracy requirements are defined in Table I.3.1-1.

Table I.3.1-1: Intra-frequency absolute RSRP and RSRQ Accuracy Requirements

Parameter	E-UTRA operating bands	Minimum RSRP
Parameter		dBm/15kHz
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127
	9, 42, 43	-126
	28	-125.5
Conditions	2, 5, 7, 27, 41, [44]	-125
	26	-124.5 Note 2
	3, 8, 12, 13, 14, 17, 20, 22	-124
	25	-123.5

NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the RSRP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.

NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.

I.3.2 Void

I.3.3 Conditions for inter-frequency RSRP and RSRQ Accuracy Requirements

This section defines the E-UTRAN inter-frequency RSRP applicable for a corresponding operating band.

The conditions for inter-frequency absolute RSRP and RSRQ accuracy requirements are defined in Table I.3.1-1.

1.3.4 Conditions for inter-frequency relative RSRP and RSRQ Accuracy Requirements

This section defines the E-UTRAN inter-frequency RSRP1,2 applicable for a corresponding operating band.

The conditions for inter-frequency relative RSRP and RSRQ accuracy requirements are defined in Table I.3.8-1.

1.3.5 Conditions for UE Rx – Tx time difference

The conditions for UE Rx-Tx time difference can be found in Annex E in TS 37.571-1.

I.3.6 Conditions for intra-frequency Reference Signal Time Difference (RSTD) measurements

The conditions for intra-frequency Reference Signal Time Difference (RSTD) Measurements can be found in Annex E in TS 37.571-1.

1.3.7 Conditions for inter-frequency RSTD measurements

The conditions for intra frequency Reference Signal Time Difference (RSTD) Measurements can be found in Annex E in TS 37.571-1.

I.3.8 Conditions for Intra-Frequency Relative RSRP Accuracy Requirements

This section defines the E-UTRAN intra-frequency RSRP1,2 applicable for a corresponding operating band.

The conditions for intra-frequency relative RSRP accuracy requirements are specified in Table I.3.8-1.

Table I.3.8-1 Intra-frequency relative RSRP accuracy requirements

Parameter	E-UTRA operating bands	Minimum RSRP1,2
Parameter		dBm/15kHz
	1, 4, 6, 10, 11, 18, 19, 21, 23, 24, 33, 34, 35, 36, 37, 38, 39, 40	-127
	9, 42, 43	-126
	28	-125.5
0	2, 5, 7, 27, 41, [44]	-125
Conditions	26	-124.5 Note 2
	3, 8, 12, 13, 14, 17, 20, 22	-124
	29 Note 3	-124
	25	-123.5

- NOTE 1: For a UE supporting a band combination of E-UTRA carrier aggregation with one uplink carrier configuration, if there is a relaxation of receiver sensitivity ΔRIB,c as defined in TS 36.101 [5] due to the CA configuration, the RSRP measurement side condition shall be increased by the amount ΔRIB,c defined for the corresponding downlink band.
- NOTE 2: The condition is -125 dBm/15kHz when the carrier frequency of the assigned E-UTRA channel bandwidth is within 865-894 MHz.
- NOTE 3: This band is used only for E-UTRA carrier aggregation with other E-UTRA bands.

1.3.9 Conditions for Intra-Frequency Absolute RSRP and RSRQ Accuracy Requirements under Time Domain Measurement Resource Restriction

This section defines the E-UTRAN intra-frequency RSRP applicable for a corresponding operating band.

The conditions for intra-frequency absolute RSRP and RSRQ accuracy requirements under time domain measurement resource restriction are as specified in Table I.3.1-1.

I.3.10 Conditions for Intra-Frequency Relative RSRP Accuracy Requirements under Time Domain Measurement Resource Restriction

This section defines the E-UTRAN intra-frequency RSRP1,2 applicable for a corresponding operating band.

The conditions for intra-frequency relative RSRP accuracy requirements under time domain measurement resource restriction are defined in Table I.3.8-1.

I.4 RRM Requirements Exceptions

I.4.1 General

I.4.2 Receiver sensitivity relaxation for UE supporting CA

For a UE supporting inter-band carrier aggregation configuration with uplink in one E-UTRA band, if there is a relaxation of receiver sensitivity $\Delta R_{IB,c}>0$ dB as defined in TS 36.101 [2], Table 7.3.1-1A, the relevant side conditions specifying received power levels (E-UTRA RSRP, SCH_RP, PRP, and Io) shall be increased by the amount $\Delta=\Delta R_{IB,c}$ defined for each of the downlink E-UTRA bands.

NOTE: This side condition adjustment applies only for a UE supporting a single inter-band LTE CA band combination. For a UE supporting additional inter-band LTE CA band combinations, the $\Delta R_{IB,c}$ for all bands supported by the UE, need to be studied [5].

I.4.3 Receiver sensitivity relaxation for UE configured with CA

1.4.3.1 Inter-band carrier aggregation

Editor's note: Capturing refsens requirements for operating band without uplink band is TBD, to align with TS 36.101[2].

In this section, requirements exceptions are described for the UE configured with inter-band carrier aggregation with one uplink active in low frequency operating band.

A relevant side condition (e.g., E-UTRA RSRP, SCH_RP, PRP, and Io) in a requirement shall be increased by the amount Δ =L2-L1, where L1 is the reference sensitivity level specified in TS 36.101[2], Table 7.3.1-1, and L2 is the reference sensitivity level specified in TS 36.101[2], Table 7.3.1A-0a, when the following conditions are fulfilled,

- both downlink component carriers on different bands are configured with CA and active,
- the single uplink is active in the low frequency operating band,
- the exception requirements specified in TS 36.101[2], Table 7.3.1A-0a, apply.

If the relaxation Δ specified in this section applies, then the relaxation specified in Section B.4.2 should not be applied.

1.4.3.2 Intra-band non-contiguous carrier aggregation

For a UE configured with intra-band non-contiguous carrier aggregation configuration with uplink in one E-UTRA band, if there is a relaxation of receiver sensitivity ΔR_{IBNC} >0 as defined in TS 36.101 [2], Section Table 7.3.1A-3, the relevant side conditions specifying received power levels (E-UTRA RSRP, SCH_RP, PRP, and Io) shall be increased by the amount $\Delta = \Delta R_{IBNC}$ defined for the downlink SCC, when the following conditions are fulfilled,

- both downlink component carriers are configured with CA and active,
- one uplink carrier is active,
- the exception requirements specified in TS36.101[2], Table 7.3.1A-3, apply.

If the relaxation Δ specified in this section applies, then the relaxation specified in Section I.4.2 should not be applied.

I.4.3.3 Inter-band carrier aggregation with operating bands without uplink band

In this section, requirements are described for the UE configured with inter-band carrier aggregation involving one operating band without uplink band.

There is no relaxation in relevant side condition (e.g., E-UTRA RSRP, SCH_RP, PRP, and Io) in a requirement, i.e., Δ =0, when the following conditions are fulfilled,

- both downlink component carriers on different bands are configured with CA and active,
- the single uplink is active in the higher frequency operating band,
- conditions specified in TS36.101[2], Table 7.3.1A-0d, apply.

If Δ specified in this section applies, then no other additional relaxation to REFSENS shall be applied.

Annex J (informative):

Handling requirements and tests for different releases and UE capabilities

This annex gives guidance on how minimum requirements in different releases of 3GPP TS 36.133 [4] and different UE capabilities are handled in the specification 3GPP TS 36.521-3.

J.1 General considerations

Same as TS 36.521-1 [10] Annex I with the following exceptions:

```
- Instead of "TS 36.101" → use "TS 36.133"

- Instead of "TS 36.521-1" → use "TS 36.521-3"

- Instead of "Annex I" → use "Annex J"
```

J.2 Concrete scenarios

J.2.1 Tests for minimum requirements varying between releases, without introduction of new features

Same as TS 36.521-1 [10] Annex I with the following exceptions:

```
- Instead of "TS 36.101" → use "TS 36.133"

- Instead of "TS 36.521-1" → use "TS 36.521-3"

- Instead of "Annex I" → use "Annex J"
```

J.2.2 Tests for CA (Carrier aggregation)

FFS

Annex K (informative): Change history

					Change history		
Date	TSG#	TSG Doc.	CR	Re v	Subject/Comment	Old	New
2008-06	RAN5#39bis	R5-082129			R5-082129: Restructure of TS 36.521-1 and RRM proposal (Split of RRM from 36.521-1 v0.2.0 in its own specification 36.521-3 v0.1.0)		0.1.0
2008-06	RAN5#39bis	R5-082174			Following approved TPs have been included: R5-082129: Restructure of TS 36.521-1 and RRM proposal (Split of RRM from 36.521-1 v0.2.0 in its own specification 36.521-3 v0.1.0) R5-082160: Cover for LTE E-UTRAN RRC_IDLE State Mobility text proposal R5-082161: Cover for LTE E-UTRAN RRC_CONNECTED State Mobility text proposal R5-082162: Update of 36.521-1: Introduction of HRPD and CDMA2000 in RRM test cases R5-082163: Cover for LTE UE Transmit Timing Requirements text proposal Editorial changes for Annexes	0.1.0	0.2.0
2008-08	RAN5#40	R5-083164			Follow ing approved TPs have been included: R5-083051: LTE E-UTRAN RRC_IDLE State Mobility text proposal R5-083052: LTE E-UTRAN RRC_CONNECTED State Mobility text proposal R5-083053: LTE UE Transmit Timing Requirements text proposal R5-083054: LTE UE Measurement Procedures text proposal R5-083813: LTE UE Measurement Performance Requirements text proposal R5-083138: Text proposal for LTE E-UTRAN Cell Re-selection to HRPD or to cdma2000 1xRTT in TS 36.521-3 R5-083056: RRC Connection Mobility Control text proposal R5-083164: LTE-RF 36-521-3 after RAN5#40 Editorial restructuring to section 4	0.2.0	0.3.0
2008-10	RAN5#40Bis	R5-084073			Follow ing approved TPs have been included: R5-084073: TS 36.521-3 after RAN5#40Bis R5-084079: LTE Cell Re-Selection text proposal R5-084322: LTE FDD/FDD Handover for intra/inter frequency text proposal	0.3.0	0.4.0
2008-11	RAN5#41	R5-085084			Following approved TPs have been included: R5-085084 LTE-RF:TS 36.521-3 after RAN5#41 R5-085718 LTE RRM Cell Re-Selection text proposal R5-085719 LTE RRM FDD/FDD Handover for intra/inter frequency text proposal R5-085720 E-UTRAN FDD intra-frequency measurement stext proposal R5-085740 RSRQ Accuracy Measurement Performance Requirements text proposal R5-085722 Text Proposal for Cell Configuration mapping annex in 36.521-3 Editor's cleanup	0.4.0	0.5.0

2009-01	RAN5#41Bis	R5-086067	Following approved TPs have been included:	0.5.0	0.6.0
			R5-086067 LTE-RF: TS 36.521-3 after RAN5#41Bis	0.0.0	0.0.0
			R5-086149 References to connection diagrams		
			R5-086418 LTE RRM Cell Re-Selection text proposal		
			R5-086095 Cell configuration reference correction for RRM		
			tests in 36.521-3 section 3A.3		
			R5-086419 LTE RRM FDD/FDD Handover for intra/inter		
			frequency text proposal		
			R5-086420 E-UTRAN FDD intra-frequency measurements text		
			proposal		
			R5-086431 RSRQ Accuracy Measurement Performance		
			Requirements text proposal		
			R5-086082 LTE UE Transmit Timing Requirements text		
			proposal		
			R5-086422 Text proposal for RSRP measurement accuracy		
			test cases		
			R5-086432 E-UTRAN FDD- FDD Inter-Frequency		
			Measurements text proposal		
			R5-086142 Measurement Reference Channels and OCNG for		
			RRM testing		
			R5-086150 Statistical testing in RRM tests		
			Editor's cleanup		

2000 02	DA NE#40	DE 000404	Following approved TPa have been included:	0.6.0	1 0 0	\neg
2009-03	RAN5#42	R5-090191		0.6.0	1.0.0	
			R5-091026 TDD Intra frequency RSRQ Accuracy			
			R5-091085 TDD Inter frequency RSRQ Accuracy			
			R5-091035 LTE RRM FDD/FDD Handover for intra/inter			
			frequency text proposal			
			R5-091047 E-UTRAN FDD intra-frequency measurements text			
			proposal			
			R5-091029 RSTQ Accuracy Measurement Performance			
			Requirements text proposal			
			R5-091041 LTE RRM E-UTRA FDD to GSM Cell Re-Selection			
			text proposal			
			R5-091040 LTE RRM E-UTRA FDD to GSM Handover text			
			proposal			
			R5-090182 LTE UE Measurement Procedures Structure text			
			proposal			
			R5-091048 LTE RRM E-UTRA FDD to UTRA FDD Cell Search			
			text proposal			
			R5-090184 LTE UE inter-RAT Handover Structure text proposal			
			R5-091039 LTE RRM E-UTRA FDD to UTRA FDD Handover			
			text proposal			
			R5-091053 LTE UE Transmit Timing Requirements text			
			proposal			
			R5-090191 LTE-RF: TS 36.521-3 after RAN5#42			
			R5-091091 Intra-frequency cell search TDD			
			R5-091088 Intra-frequency Absolute RSRP measurement			
			accuracy TDD			
			R5-091090 Intra-frequency Relative RSRP measurement			
			accuracy TDD			
			R5-091089 Inter-frequency RSRP absolute accuracy TDD			
			R5-091087 Inter-frequency RSRP relative accuracy TDD			
			R5-091028 Text Proposal for RSRP Measurement Accuracy			
			test cases			
			R5-091076 Text Proposal for Annex C of TS 36.521-3			
			R5-091051 TP of E-UTRAN TDD & GSM cell re-selection test			
			case			
			R5-091043 TP of E-UTRAN TDD & TDD inter frequency cell			
			re-selection test case			
			R5-091036 TP of E-UTRAN TDD & TDD inter frequency			
			handover test case			- [
			R5-091044 TP of E-UTRAN TDD - TDD intra frequency cell re-			
			selection test case			
			R5-091038 TP of E-UTRAN TDD & TDD intra frequency			
			handover test case			
			R5-091045 TP of E-UTRAN TDD & UTRAN TDD cell re- selection test case			
			R5-091049 E-UTRAN FDD- FDD Inter-Frequency			
			Measurements text proposal			
			R5-091050 E-UTRAN TDD- TDD Inter-Frequency			
			Measurements text proposal			
			R5-091052 LTE-RF: Update to 36.521-3 Annex E Cell			
			Configuration mapping			- [
			R5-091064 Correction to frequencies to be tested in RRM test			
			cases			
			R5-091042 LTE RRM Cell Re-Selection text proposal			
			Editor's cleanup			- [
<u> </u>	1	1		l	1	_

R5-091263 LTE-RRM E-UTRA FDD to GSM Cell Re-Selection text proposal R5-091922 LTE-RRM E-UTRA FDD to GSM Cell Re-Selection text proposal R5-091923 LTE-RRM E-UTRA FDD - UTRA TDD Cell Re-Selection text proposal R5-091924 TP of E-UTRA TDD - GSM cell reselection : UTRA is of higher priority R5-091945 TP of E-UTRA TDD - UTRA TDD cell re-selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of higher priority rest case R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091946 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA FDD handover text proposal R5-091930 TP of E-UTRA TDD to UTRA FDD handover text proposal R5-091265 LTE-RRM E-UTRA FDD to UTRA FDD cell Search (fading) text proposal R5-091266 LTE-RRM RSQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091931 LTE-RRM E-UTRA FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRA FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091934 LTE-RRM E-UTRA FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRA FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091936 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal	1.0
text proposal R5-091923 LTE-RRM E-UTRA FDD - UTRA TDD Cell Re- Selection text proposal R5-091924 TP of E-UTRA TDD- GSM cell reselection R5-091925 TP of E-UTRA TDD-UTRAN TDD cell re- Selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD- UTRA TDD cell reselection: UTRA is of lower priority test case R5-091926 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091931 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091930 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091935 LTE-RRM E-UTRAN FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD to UTRA TDD Cell Search	1.0
R5-091923 LTE-RRM E-UTRA FDD - UTRA TDD Cell Re-Selection text proposal R5-091924 TP of E-UTRA TDD-GSM cell reselection R5-091945 TP of E-UTRA TDD-UTRAN TDD cell re-selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA TDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091947 LTE-RRM: E-UTRA TDD to UTRA TDD handover text case R5-091265 LTE-RRM: E-UTRA TDD to UTRA TDD handover text case R5-091266 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091932 LTE-RRM E-UTRAN FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UTRA TDD Cell Search	
Selection text proposal RS-091924 TP of E-UTRA TDD- GSM cell reselection RS-091945 TP of E-UTRA TDD-UTRAN TDD cell re-selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRA TDD intra-frequency measurements text proposal R5-091932 LTE-RRM F-UTRA TDD intra-frequency measurements text proposal R5-091932 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091932 LTE-RRM E-UTRAN FDD to UTRA FDD Cell Search (fading) text proposal R5-091931 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal	
R5-091945 TP of E-UTRA TDD-GSM cell reselection R5-091945 TP of E-UTRA TDD-UTRAN TDD cell re-selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091948 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091931 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091931 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal	
R5-091945 TP of E-UTRA TDD-UTRAN TDD cell re-selection: UTRA is of higher priority R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091326 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091931 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal	
UTRA is of higher priority RS-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case RS-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal RS-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal RS-091938 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal RS-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal RS-091947 LTE-RRM: Handover test proposal RS-091930 TP of E-UTRA TDD to UTRA TDD handover test case RS-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal RS-091266 LTE-RRM SRQ Accuracy Measurement Performance Requirements text proposal RS-091932 LTE-RRM E-UTRAN FDD to UTRA FDD Cell Search (fading) text proposal RS-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal RS-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal RS-091934 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal RS-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal RS-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal RS-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal RS-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal RS-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal RS-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal RS-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal	
R5-091926 TP of E-UTRA TDD - UTRA TDD cell reselection: UTRA is of lower priority test case R5-091264 LTE- RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE- RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE- RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE- RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE- RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091932 LTE- RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091932 LTE- RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE- RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE- RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE- RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE- RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal	
UTRA is of lower priority test case R5-091264 LTE- RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE- RRM E- UTRA FDD to GSM Handover text proposal R5-091928 LTE- RRM E- UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE- RRM: E- UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE- RRM: Handover test proposal R5-091947 LTE- RRM: Handover test proposal R5-091930 TP of E- UTRA TDD to UTRA TDD handover test case R5-091265 LTE- RRM E- UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE- RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-09132 LTE- RRM E- UTRAN FDD to UTRA FDD Cell Search (fading) text proposal R5-091931 LTE- RRM E- UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE- RRM: E- UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM: E- UTRAN TDD & UE Transmit Timing Accuracy text proposal	
R5-091264 LTE-RRM FDD/FDD Handover for intra/inter frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM: E-UTRA NFDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRAN TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRAN TDD & UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
frequency text proposal R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091934 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRAN TDD & UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
R5-091931 LTE-RRM E-UTRA FDD to GSM Handover text proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM E-UTRAN TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
proposal R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091932 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM: E-UTRAN TDD & UE Timing Advance	
R5-091928 LTE-RRM E-UTRA FDD to UTRA FDD Handover text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRAN FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Search (fading) text proposal R5-091935 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
text proposal R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRAN TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance	
R5-091946 LTE-RRM: E-UTRA TDD to UTRA FDD Handover text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
text proposal R5-091947 LTE-RRM: Handover test proposal R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091332 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRAN TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM: E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD & UE Timing Advance	
R5-091930 TP of E-UTRA TDD to UTRA TDD handover test case R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD Cell Search	
case R5-091265 LTE- RRM E- UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE- RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE- RRM E- UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE- RRM E- UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE- RRM E- UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE- RRM: E- UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE- RRM E- UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM E- UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE- RRM E- UTRAN TDD To UTRA TDD Cell Search	
R5-091265 LTE-RRM E-UTRAN FDD intra-frequency measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD To UTRA TDD Cell Search	
measurements text proposal R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD Cell Search	
R5-091266 LTE-RRM RSRQ Accuracy Measurement Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN TDD Cell Search	
Performance Requirements text proposal R5-091932 LTE-RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN FDD to UTRA TDD Cell Search	
R5-091932 LTE- RRM E-UTRA FDD to UTRA FDD Cell Search (fading) text proposal R5-091933 LTE- RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE- RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE- RRM: E- UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE- RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE- RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE- RRM E-UTRAN FDD to UTRA TDD Cell Search	
(fading) text proposal R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN FDD to UTRA TDD Cell Search	
R5-091933 LTE-RRM E-UTRAN FDD & UE Transmit Timing Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRAN FDD to UTRA TDD Cell Search	
Accuracy text proposal R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
R5-091276 LTE-RRM E-UTRAN FDD & UE Timing Advance Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
Adjustment Accuracy text proposal R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
R5-091934 LTE-RRM: E-UTRA TDD to UTRA FDD Cell Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
Search (fading) text proposal R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
R5-091935 LTE-RRM E-UTRAN TDD & UE Transmit Timing Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
Accuracy text proposal R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
R5-091936 LTE-RRM E-UTRAN TDD & UE Timing Advance Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
Adjustment Accuracy text proposal R5-091937 LTE-RRM E-UTRA FDD to UTRA TDD Cell Search	
R5-091937 LTE- RRM E- UTRA FDD to UTRA TDD Cell Search	
(fading) text proposal	
R5-091381 EUTRAN TDD to UTRAN TDD cell search (fading)	
R5-091386 LTE RRM TDD Inter Frequency RSRP Accuracy	
text proposal	
R5-091398 Text Proposal for RSRP Measurement Accuracy	
l test cases	
R5-091948 LTE-RRM: Measurements test proposal	
R5-091431 RRM-EUTRAN FDD RLM test for out-of-sync	
R5-091434 RRM-EUTRAN TDD RLM test for out-of-sync	
R5-091435 RRM-EUTRAN FDD RLM test for In-sync	
R5-091436 RRM-EUTRAN TDD RLM test for In-sync	
R5-091468 RRM E-UTRAN FDD-FDD Inter-frequency	
Measurements	
R5-091469 RRM E-UTRAN TDD-TDD Inter-frequency	
Measurements	
R5-091939 LTE-RRM cell configuration mapping updates	
R5-091407 Update of statistical requirements to 36.521-3	
Editor's cleanup	

Measurement R5-092617 RRM E-UTRAN TDD-TDD Inter-frequency Measurement R5-092068 RRM-EUTRAN FDD RLM test for out-of-sync at in-synch R5-092069 RRM-EUTRAN TDD RLM test for out-of-sync at in-synch R5-092071 Reference measurement Channels for Radio Lin Monitoring Tests with 2 Antennas R5-092127 Update of statistical requirements to 36.521-3 R5-092630 LTE RRM: 1→2 RX antenna R5-092618 Text Proposal for E-UTRAN FDD-UTRAN FDD re-selection test cases R5-092651 Text Proposal for E-UTRAN FDD-GSM Measurements test case R5-0926620 LTE-RRM E-UTRAN TDD to GSM event triggerer reporting in AWGN text proposal R5-0923630 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092381 LTE-RRM E-UTRAN FDD to GSM Cell Re-Selection text proposal R5-092623 LTE-RRM E-UTRAN FDD to GSM Cell Re-Selection text proposal R5-092624 LTE-RRM E-UTRAN FDD to GSM Cell Re-Selection text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal	nd hk cell d y	
R5-092068 RRM-EUTRAN FDD RLM test for out-of-sync at in-synch R5-092069 RRM-EUTRAN TDD RLM test for out-of-sync at in-synch R5-092071 Reference measurement Channels for Radio Lin Monitoring Tests with 2 Antennas R5-092127 Update of statistical requirements to 36.521-3 R5-092630 LTE RRM: 1→2 RX antenna R5-092618 Text Proposal for E-UTRAN FDD-UTRAN FDD- re-selection test cases R5-092651 Text Proposal for E-UTRAN FDD-GSM Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggered reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for E-UTRAN FDD RRM text proposal R5-092362 LTE-RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092362 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092362 LTE-RRM E-UTRAN FDD To GSM Cell Re-Selection text proposal R5-092386 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD To UE Transmit Timing Accuracy text proposal R5-092624 LTE-RRM E-UTRAN FDD To UE Transmit Timing Accuracy text proposal R5-092624 LTE-RRM E-UTRAN FDD To UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD To andom access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD To andom access: contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD To andom access: contention based scenario text proposal	nd hk cell d y	
R5-092069 RRM-EUTRANTDD RLM test for out-of-sync at in-synch R5-092071 Reference measurement Channels for Radio Lift Monitoring Tests with 2 Antennas R5-092127 Update of statistical requirements to 36.521-3 R5-092630 LTE RRM. 1-3-2 RX antenna R5-092631 Text Proposal for E-UTRAN FDD-UTRAN FDD- re-selection test casee R5-092651 Text Proposal for E-UTRAN FDD - GSM Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggerer reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E- UTRAN FDD RRM tests to align with support of RRM text proposal R5-092384 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092622 LTE-RRM E-UTRAN FDD to GSM Cell Re-Selection text proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal	cell d y tt	
Monitoring Tests with 2 Antennas R5-092127 Update of statistical requirements to 36.521-3 R5-092630 LTE RRM. 1-92 RX antenna R5-092618 Text Proposal for E-UTRAN FDD- UTRAN FDD re-selection test cases R5-092651 Text Proposal for E-UTRAN FDD - GSM Measurements test case R5-092651 Text Proposal for E-UTRAN FDD - GSM Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggered reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092386 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRAN FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal	cell d y tt	
R5-092630 LTE RRM: 1→2 RX antenna R5-092618 Text Proposal for E-UTRAN FDD-UTRAN FDD re-selection test cases R5-092651 Text Proposal for E-UTRAN FDD - GSM Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggered reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-09231 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRAN FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092629 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-0926262 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-0926262 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex	d y t t y ion	
re-selection test cases R5-092651 Text Proposal for E-UTRAN FDD - GSM Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggerer reporting in AWGN text proposal R5-092360 LTE-RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E- UTRAN FDD RRM tests to align with support of RRM text proposal R5-092384 LTE-RRM E-UTRAN FDD Cell Re-Selection tex proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal	d y t t y ion	
Measurements test case R5-092620 LTE-RRM E-UTRA TDD to GSM event triggered reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092361 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRAN FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD thandover text	y .t y ion	
reporting in AWGN text proposal R5-092360 LTE RRM TDD Inter Frequency RSRP Accuracy text proposal R5-092621 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E- UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection tex proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRA FDD to GSM Cell Re-Select text proposal R5-092387 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092696 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal	y .t y ion	
text proposal R5-092621 LTE-RRM Default Message Contents for support of RRM text proposal R5-092384 LTE-RRM Update of Message Contents for E- UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection tex proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accurac Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRA FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex	y join	
RRM text proposal R5-092384 LTE- RRM Update of Message Contents for E-UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE- RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE- RRM FDD Inter Frequency RSRQ Accurace Measurement Performance Requirements text proposal R5-092387 LTE- RRM E-UTRA FDD to GSM Cell Re-Select text proposal R5-092623 LTE- RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE- RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE- RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE- RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE- RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE- RRM E-UTRAN FDD to HRPD Handover text	y ion	
UTRAN FDD RRM tests to align with support of RRM text proposal R5-092622 LTE- RRM E- UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE- RRM FDD Inter Frequency RSRQ Accurace Measurement Performance Requirements text proposal R5-092387 LTE- RRM E- UTRA FDD to GSM Cell Re-Select text proposal R5-092623 LTE- RRM E- UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE- RRM E- UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092624 LTE- RRM E- UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092390 LTE- RRM E- UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE- RRM E- UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE- RRM E- UTRAN FDD to HRPD Handover text	y ion	
R5-092622 LTE-RRM E-UTRAN FDD Cell Re-Selection text proposal R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accurace Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRA FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092690 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092696 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex	y ion	
R5-092386 LTE-RRM FDD Inter Frequency RSRQ Accuracy Measurement Performance Requirements text proposal R5-092387 LTE-RRM E-UTRA FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex	ion	
R5-092387 LTE-RRM E-UTRAN FDD to GSM Cell Re-Select text proposal R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex		
R5-092623 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in long DRX text proposal R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover text		
R5-092624 LTE-RRM E-UTRAN FDD intra frequency cell search (fading) in short DRX text proposal R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non-contention based scenario text proposal R5-092628 LTE-RRM E-UTRAN FDD to HRPD Handover tex		
R5-092390 LTE-RRM E-UTRAN FDD - UE Transmit Timing Accuracy text proposal R5-092626 LTE-RRM E-UTRAN FDD rando m access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD rando m access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRA FDD to HRPD Handover tex		
R5-092626 LTE-RRM E-UTRAN FDD random access: contention based scenario text proposal R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRA FDD to HRPD Handover tex		
R5-092627 LTE-RRM E-UTRAN FDD random access: non- contention based scenario text proposal R5-092628 LTE-RRM E-UTRA FDD to HRPD Handover tex		
R5-092628 LTE-RRM E-UTRA FDD to HRPD Handover tex		
	t	
R5-092629 LTE-RRM E-UTRA FDD to cdma2000 1xRTT Handover text proposal		
R5-092443 Addition of band 18 and 19 to LTE RRM test car Editor's cleanup	ses	
2009-05 RAN#44 Updated to v8.0.0 after RAN#44 with no technical change. 2009-06 Editorial clean up	2.0. 8.0.	
2009-09 RAN#45 R5-094036 0001 - Correction CR to 36.521-3: Update of Requirements for E-	8.0.	
UTRAN (FDD) cell re-selection tests 2009-09 RAN#45 R5-094037 0002 - Correction CR to 36.521-3: Update of Requirements for E-	8.0.	1 8.1.0
UTRAN FDD - FDD Inter Frequency Handover test 2009-09 RAN#45 R5-094038 0003 - Correction CR to 36.521-3: Update of Requirements for E-	8.0.	1 8.1.0
UTRAN FDD - FDD Intra Frequency Cell Search test 2009-09 RAN#45 R5-094039 0004 - Correction CR to 36.521-3: Update of Requirements for E-	8.0.	1 8.1.0
UTRAN FDD - UE transmit timing accuracy test 2009-09 RAN#45 R5-094040 0005 - Correction CR to 36.521-3: Update of Requirements for E-	8.0.	1 8.1.0
UTRAN FDD - GSM cell re-selection test 2009-09 RAN#45 R5-094041 0006 - Correction CR to 36.521-3: Update of Requirements conditions and the conditions of t		1 8.1.0
for E-UTRAN FDD - UE timing advance adjustment accuractest	-	
2009-09 RAN#45 R5-094042 0007 - Correction CR to 36.521-3: Update of Requirements for E-UTRAN FDD - GSM Handover test	8.0.	
2009-09 RAN#45 R5-094043 0008 - Correction CR to 36.521-3: Update of Requirements for E- UTRAN FDD - UTRAN FDD Handover test	8.0.	
2009-09 RAN#45 R5-094045 0009 - Correction CR to 36.521-3: Update of Requirements for E-UTRAN FDD - GSM Cell Search test	8.0.	
2009-09 RAN#45 R5-094047 0010 - Correction CR to 36.521-3: Update of Requirements for E-UTRAN FDD - Contention Based Random Access test	8.0.	
2009-09 RAN#45 R5-094048 0011 - Correction CR to 36.521-3: Update of Requirements for E- UTRAN FDD - Non-Contention Based Random Access test	8.0.	1 8.1.0
2009-09 RAN#45 R5-094049 0012 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD-FE Inter-frequency cell search when DRX is used under fading propagation conditions		1 8.1.0

2009-09	RAN#45	R5-094050	0013	-	Correction CR to 36.521-3: Update of E-UTRAN FDD-FDD Intra-frequency cell search when DRX is used under fading	8.0.1	8.1.0
2009-09	RAN#45	R5-094051	0014	-	propagation conditions Correction CR to 36.521-3: Update of Annex H Default	8.0.1	8.1.0
					Message Contents for support of RRM		
2009-09	RAN#45	R5-094217	0015	-	Update for E-UTRA FDD - UTRA TDD cell reselection	8.0.1	8.1.0
2009-09	RAN#45	R5-094218	0016	-	Test proposal for E-UTRA FDD - UTRA TDD HO	8.0.1	8.1.0
2009-09	RAN#45	R5-094219	0017	-	Test proposal for E-UTRA TDD random access: contention based scenario	8.0.1	8.1.0
2009-09	RAN#45	R5-094220	0018	-	Test proposal for E-UTRA TDD random access: non- contention based scenario	8.0.1	8.1.0
2009-09	RAN#45	R5-094221	0019	-	Update for TDD Intra-frequency RSRQ measurement accuracy	8.0.1	8.1.0
2009-09	RAN#45	R5-094222	0020	-	Update for TDD Inter-frequency RSRQ measurement accuracy	8.0.1	8.1.0
2009-09	RAN#45	R5-094223	0021	-	Update for E-UTRAN TDD Transmit timing accuracy	8.0.1	8.1.0
2009-09	RAN#45	R5-094225	0022	-	Update for E-UTRA FDD - UTRA TDD cell search(fading)	8.0.1	8.1.0
2009-09	RAN#45	R5-094253	0023	-	CR to 36.521-3: Addition of E-UTRAN FDD Intra-frequency RRC Re-establishment	8.0.1	8.1.0
2009-09	RAN#45	R5-094254	0024	-	CR to 36.521-3: Addition of E-UTRAN FDD Inter-frequency RRC Re-establishment	8.0.1	8.1.0
2009-09	RAN#45	R5-094285	0025	-	LTE-RRM: Introduction of Common Exception messages table for E-UTRAN TDD-UTRAN FDD handover and E-UTRAN TDD-UTRAN FDD measurements	8.0.1	8.1.0
2009-09	RAN#45	R5-094358	0026	<u> </u>		8.0.1	8.1.0
2009-09	RAN#45	R5-094442	0027	 -	CR to 36.521-3: Update of E-UTRA FDD to HRPD Handover	8.0.1	8.1.0
					and E-UTRA FDD to cdma2000 1xRTT Handover test cases		
2009-09	RAN#45	R5-094709	0028	-	LTE RRM: Correction to test cases 4.4.1 and 4.4.2	8.0.1	8.1.0
2009-09	RAN#45	R5-094713	0029	-	Resubmission - Update to E-UTRAN to HRPD Cell Re-	8.0.1	8.1.0
					Selection (HRPD is of lower priority) test case		
2009-09	RAN#45	R5-094720	0030	-	Resubmission - Update to E-UTRAN to CDMA2000 1xRTT Cell Re-Selection (CDMA2000 1xRTT is of low er priority) test case	8.0.1	8.1.0
2009-09	RAN#45	R5-094743	0031	<u> </u>	RRM TCs in test mode	8.0.1	8.1.0
2009-09	RAN#45	R5-094927	0032	+	Correction CR to 36.521-3: Update of inter-frequency E-	8.0.1	8.1.0
	RAN#45	R5-094928	0033	_	UTRAN TDD-TDD cell re-selection 4.2.6 Correction CR to 36.521-3: Update of E-UTRAN TDD -	8.0.1	8.1.0
2009-09	RAN#45	R5-094929	0034	Ļ	UTRAN TDD cell re-selection 4.3.4 Correction CR to 36.521-3: Update of Requirements for E-	8.0.1	8.1.0
2009-09	RAN#45	R5-094929	0034		UTRAN FDD - UTRAN FDD cell re-selection test LTE-RRM: Addition of common messages to Annex H	8.0.1	8.1.0
	RAN#45	R5-094931	0036		Test Proposal for E-UTRAN TDD Intra-frequency RRC Re-	8.0.1	8.1.0
2009-09	RAN#45	R5-094932	0037	-	establishment Test Proposal for E-UTRAN TDD Inter-frequency RRC Re-	8.0.1	8.1.0
	RAN#45	R5-094933	0038	<u> </u>	establishment Update for E-UTRAN TDD Timing advanced adjustment	8.0.1	8.1.0
2009-09			0039	<u> </u>	accuracy Correction CR to 36.521-3: Update of Requirements for E-	8.0.1	8.1.0
					UTRAN FDD - UTRAN FDD Cell Search test		0.1.0
2009-09	RAN#45	R5-094935	0040	-	E-UTRA TDD - TDD Intra frequency cell search with DRX	8.0.1	8.1.0
2009-09	RAN#45	R5-094936	0041	-	TDD - TDD RSRP measurement	8.0.1	8.1.0
	RAN#45	R5-094937	0042	-	Update 8.10.1 E-UTRAN TDD-GSM event triggered reporting in AWGN	8.0.1	8.1.0
2009-09 2009-09	RAN#45 RAN#45	R5-094938 R5-094939	0043 0044	-	Add new to 8.10.2 EUTRAN TDD-GSM cell search with DRX Add new to 8.7.2 EUTRAN TDD - UTRAN TDD cell search with DRX	8.0.1 8.0.1	8.1.0 8.1.0
2009-09	RAN#45	R5-094940	0045	-	E-UTRA TDD - TDD Inter frequency cell search with DRX	8.0.1	8.1.0
2009-09	RAN#45	R5-094942	0046		Update to Annex E Cell Configuration Mapping	8.0.1	8.1.0
2009-09	RAN#45	R5-094967	0047	-	RRM Radio Link Monitoring FDD update	8.0.1	8.1.0
2009-09	RAN#45	R5-094968	0048	-	RRM Radio Link Monitoring TDD update	8.0.1	8.1.0
2009-09	RAN#45	R5-094969	0050	-	RRM: E-UTRAN FDD - UTRAN FDD SON ANR cell search reporting	8.0.1	8.1.0
2009-09	RAN#45	R5-094970	0051	-	CR to 36.521-3:Message updates for RSRP and RSRQ Accuracy measurement	8.0.1	8.1.0
2009-09	RAN#45	R5-094971	0052	Ŀ	RRM OCNG and RMC update	8.0.1	8.1.0
2009-09	RAN#45	R5-094972	0053	Ŀ	RRM: Update of Annex E for SON	8.0.1	8.1.0
	RAN#46	R5-095492	0054	Ŀ	Removal of test state 4 in RRM test cases	8.1.0	8.2.0
2009-12	RAN#46	R5-095493	0055	_	CR to 36.521-3 Annexes of E-UTRAN cell reselection test cases	8.1.0	8.2.0
2009-12	RAN#46	R5-095499	0056	-	CR for E-UTRAN FDD - UTRAN TDD handover	8.1.0	8.2.0
2009-12 2009-12	RAN#46 RAN#46	R5-095501 R5-095503	0057 0058	- -	CR for E-UTRAN TDD - UE Transmit Timing Accuracy CR for E-UTRAN FDD - UTRAN TDD event triggered reporting	8.1.0 8.1.0	8.2.0 8.2.0
		1		1	under fading propagation conditions	Ī	
2009-12	RAN#46	R5-095504	0059	-	Correction to TDD RSRP and RSRQ measurement	8.1.0	8.2.0

Correction CR to 36.21-3; EUTRAN FDD - FDD pell pell pell pell pell pell pell pe								
2009-12 RAN#46 RS-095528 0061 Correction CR to 36.321-33 E-UTRAN FDD - UTRAN FDD collaboration of the respective of the PDD is of higher priority and utransprint an	2009-12	RAN#46	R5-095527	0060	-	selection intra frequency case and inter frequency case	8.1.0	8.2.0
Tesselection: UTRA FDD is of higher priority and UTRA FDD is of lower priority conformance minimum requirements						conformance minimum requirements updates		
Content Cont	2009-12	RAN#46	R5-095528	0061	-	Correction CR to 36.521-3: E-UTRAN FDD - UTRAN FDD cell	8.1.0	8.2.0
Content Cont						re-selection: UTRA FDD is of higher priority and UTRA FDD is		
2009-12 RANN#46 R5-095529 0062 - Correction CR 10 36 521-3: E-UTRAN FDD - FDD Inter Frequency event triggered reporting under fading propagation conditions in asynchronous cells case Correction CR 10 36 521-3: E-UTRAN FDD - FDD Inter Frequency event triggered reporting when DRX is used under fading propagation conditions and propagation conditions R5-095531 0064 - Correction CR 10 36 521-3: E-UTRAN FDD - FDD Inter Frequency event triggered reporting when DRX is used under fading propagation conditions R5-095531 0064 -								
Frequency event triggered reporting under fading propagation conditions in asynchronous collection as synchronous collection with the propagation conditions in asynchronous collecting when PKX is used under fading propagation conditions as synchronous collecting when PKX is used under fading propagation conditions are synchronous collecting when PKX is used under fading propagation conditions are synchronous collecting when PKX is used under fading propagation conditions.	2009-12	RAN#46	R5-095529	0062	-	Correction CR to 36.521-3: E-UTRAN FDD - FDD Inter	8.1.0	8.2.0
Conditions in asyrchirorous cells case Conditions in asyrchirorous cells case Conditions in asyrchirorous cells case Conditions in asyrchirorous cells case St. 0.8.2.0								
2009-12 RANIH46 R5-095530 0063 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter flading propagation conditions Correction CR 10 36.521-3: E-UTRAN FDD - FDD Intra Frequency event triggered reporting when RPX is used under Correction CR 10 36.521-3: E-UTRAN FDD - FDD Intra R5-09537 0065 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Intra R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0066 - Correction CR 10 36.521-3: E-UTRAN FDD - FDD Inter R5-09538 0069								
Frequency event triggered reporting when DRX is used under fading propagation conditions	2009-12	RA N#46	R5-095530	0063	-		810	820
Fading propagation conditions S. 1.0 S. 2.0				0000			00	0.2.0
2009-12 RAN#46 R5-095531 0064 Correction CR to 36.521-3; EUTRAN FDD - FDD Intra Frequency event triggered reporting under fading propagation conditions						fading propagation conditions		
Frequency event triggered reporting under fading propagation conditions	2009-12	RΔ N#46	R5-095531	0064	<u> </u>		810	820
Conditions	2000 12	10 (14)/10	1.0 000001	0001			0.1.0	0.2.0
2009-12 RANI#46 R5-095537 0005 Correction CR to 36.521-3; E-UTRAN FDD - UE Transmit 8.1.0 8.2.0 2009-12 RANI#46 R5-095538 0006 Correction CR to 36.521-3; E-UTRAN FDD - FDD inter frequency event triggered reporting when DRX is used under fading propagation conditions 8.1.0 8.2.0 2009-12 RANI#46 R5-095573 0006 Correction CR to 36.521-3; Ceneral RRM Updates 8.1.0 8.2.0 2009-12 RANI#46 R5-095573 0006 Lpdate Tc 2.7 2; E-UTRAN TDD - UTRAN TDD Cell Search when DRX is used under fading propagation conditions 8.1.0 8.2.0 2009-12 RANI#46 R5-095576 0007 Lpdate Tc 2.7 2; E-UTRAN TDD - UTRAN TDD Cell Search when DRX is used under fading propagation conditions 8.1.0 8.2.0 2009-12 RANI#46 R5-095774 0007 Lpdate Tc 2.7 2; E-UTRAN TDD - TDD intra-frequency event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RANI#46 R5-095741 0007 Lpdate Tc 2.7 1; E-UTRAN TDD - TDD intra-frequency event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RANI#46 R5-095917 00073 Lpdate of Armex H.2.3 in 36.521-3 E-UTRAN TDD - TDD inter 8.1.0 8.2.0 2009-12 RANI#46 R5-095917 00073 Lpdate of Armex H.2.3 in 36.521-3 E-UTRAN TDD - TDD inter 8.1.0 8.2.0 2009-12 RANI#46 R5-09544 00074 Correction CR to 36.521-3; E-UTRAN TDD - UTRAN TDD inter 8.1.0 8.2.0 2009-12 RANI#46 R5-096248 00075 Lpdate E RANI#46 R5-096248 00075 Lpdate E RANI#46 R5-096249 00075 Lpdate E RANI#46 R5-096259 00076 Lpdate E RANI#46 R5-096259								
Timing Accuracy case Timing Accuracy case Correction GR 10 8 52.7 : E-UTRAN FDD - FDD Inter Insquency event triggered reporting when DRX is used 8.1.0 8.2.0	2009-12	RΔ N#46	R5-095537	0065	l		810	820
2009-12 RANW46 RS-095538 0066 Correction CR to 36.521-3: E-UTRAN FDD - FDD inter frequency event triggered reporting when DRX is used 1 a Native frequency event triggered reporting when DRX is used 1 a Native frequency event fre	2000 12	10 (14)/40	110 000007	0000			0.1.0	0.2.0
Indepuency event triggered reporting when DRX is used 1.0 8.2.0	2009-12	PΔ N#46	P5-005538	0066	_		810	820
2009-12 RAN#46 RS-09557 0067 Correction CR to 36.521-3: General RRM Updates 8.1.0 8.2.0	2009-12	10/11/11/10	113-033330	0000	_		0.1.0	0.2.0
2009-12 RAN#46 RS-095572 0068 Ludate TC 8.7.2 E-UTRAN TDD - UTRAN TDD cell search when DRX is used under fading propagation conditions 8.2.0 2009-12 RAN#46 RS-095573 0069 Ludate TC 8.10.2 E-UTRAN TDD - GSM event triggered reporting when DRX is used in AWGN 8.2.0 2009-12 RAN#46 RS-095576 0070 Ludate TC 8.10.2 E-UTRAN TDD - TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells 2009-12 RAN#46 RS-095741 0072 OR to the inconsistent expression in UE Measurements 8.1.0 8.2.0 2009-12 RAN#46 RS-095917 0073 Update TC 8.2.1 E-UTRAN TDD - TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells 2009-12 RAN#46 RS-095917 0073 Update TC 8.2.1 in 36.521-3: E-UTRAN TDD - DTD inter 8.1.0 8.2.0 2009-12 RAN#46 RS-095917 0074 Correction CR to 36.521-3: E-UTRAN TDD - TDD inter 8.1.0 8.2.0 2009-12 RAN#46 RS-096243 0075 Update: Radio Link Monitoring test cases: no DRX 8.1.0 8.2.0 2009-12 RAN#46 RS-096246 0104 Addition of new TC to 36.521-3: E-UTRAN TDD - UTRAN TDD 8.2.0 2009-12 RAN#46 RS-096246 0104 Addition of new TC to 36.521-3: E-UTRAN TDD - UTRAN TDD 8.2.0 2009-12 RAN#46 RS-096257 0076 Modification of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 RS-096257 0077 Addition of section 4.2.2 in 36.521-3: E-UTRAN TDD - UTRAN T	2009-12	PΔ N#46	P5-005557	0067	_		810	820
When DRX is used under fading propagation conditions					-			
Digital RANIH46 R5-095573 0069 Update T C 8.10.2 E- UTRAN TDD - CSM event triggered 8.1.0 8.2.0	2009-12	KAN#46	R3-093372	0000	-		0.1.0	0.2.0
reporting when DRX is used in AWGN	2000 12	DA NH46	DE 005572	0060		Undete TC 9.10.2 F. LTDANTDD. CCM event triggered	0.1.0	0.2.0
2009-12 RAN#46 R5-095576 0070 Update TC 8.2.1 E-UTRAN TDD - TDD Intra-frequency event triggered reporting under fading propagation conditions in synchronous cells 2009-12 RAN#46 R5-095591 0071 Update of Arnex H.2.3 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-095741 0072 CR to the inconsistent expression in UE Measurements 8.1.0 8.2.0 2009-12 RAN#46 R5-095917 0073 Update Radio Link Monitoring test cases: no DRX 8.1.0 8.2.0 2009-12 RAN#46 R5-096145 0074 Correction CR to 36.521-3: E-UTRAN FDD - FDD Inter Frequency Absolute RSRP Accuracy case Update to RRM TC:E-UTRAN FDD - UTRAN FDD - UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096243 0075 Update to RRM TC:E-UTRAN FDD - UTRAN FDD - UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096244 0104 1 Addition of new TC to 36.521-3: E-UTRAN FDD - UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096246 0105 Modification of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 Addition of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 Addition of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096258 0076 Addition of test scenario CR to 36.521-3: E-UTRAN FDD 8.2.0 2009-12 RAN#46 R5-096259 0077 Addition of test scenario CR to 36.521-3: E-UTRAN FDD 8.2.0 2009-12 RAN#46 R5-096269 0078 1 Addition of new TC to 36.521-3: E-UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096269 0078 1 Addition of new TC to 36.521-3: E-UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096269 0080 CR to 36.521-3: Update of E-UTRAN FDD to HRPP Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096269 0080 CR to 36.521-3: Update of E-UTRAN FDD to HRPP Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096269 0081 Addition of test scenario CR to 36.521-3: E-UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096269 0083 RTM TC 8.2.0 2009-12	KAN#46	Ro-090073	0009	-		0.1.0	0.2.0	
triggered reporting under fading propagation conditions in synchronous cells 33.6.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-0959741 0072 - CR to the inconsistent expression in UE Measurements 8.1.0 8.2.0 8.2.0 2009-12 RAN#46 R5-09617 0073 - Update: Radio Link Monitoring test cases: no DRX 8.1.0 8.2.	0000 40	DA N#40	DE 005570	0070			0.4.0	0.00
Synchronous cells Sync	2009-12	RAN#46	R5-095576	0070	-		8.1.0	8.2.0
2009-12 RAN#46 R5-095591 0071 - update of Arnex H.2.3 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-095741 0072 - CR to the inconsistent expression in UE Measurements 8.1.0 8.2.0 2009-12 RAN#46 R5-095917 0073 - Update: Radio Link Monitoring test cases: no DRX 8.1.0 8.2.0 2009-12 RAN#46 R5-096145 0074 - Correction CR to 36.521-3: E-UTRAN FDD - FDD Inter 8.1.0 8.2.0 2009-12 RAN#46 R5-096243 0075 - Update to RRM TC:E-UTRAN FDD - UTRAN TDD cell reselection 8.1.0 8.2.0 2009-12 RAN#46 R5-096244 0104 1 Addition of new TC to 36.521-3: E-UTRAN TDD - UTRAN FDD B.1.0 8.2.0 2009-12 RAN#46 R5-096246 0105 - Modification of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096255 0076 - CR to the RA response window's name in Random Access 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096258 0078 1 Addition of test scena						triggered reporting under rading propagation conditions in		
2009-12 RAN#46 R5-095741 0072 CR to the inconsistent expression in UE Measurements 8.1.0 8.2.0	2000 10	D 4 1 1 1 4 0	DE 005504	0074		1 -	0.4.0	0.00
Procedures Pro					-			
2009-12 RAN#46 R5-095917 0073 - Update: Radio Link Monitoring test cases: no DRX 8.1.0 8.2.0 2009-12 RAN#46 R5-096145 0074 - Correction CR to 36.521-3: E-UTRAN FDD - FDD Inter 8.1.0 8.2.0 2009-12 RAN#46 R5-096243 0075 - Update to RRM TC:E-UTRAN FDD - UTRAN TDD cell reselection 2009-12 RAN#46 R5-096244 0104 1 Addition of new TC to 36.521-3: E-UTRAN TDD - UTRAN FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096246 0105 - Modification of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0076 - Rodification of section 4.2.2 in 36.521-3 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - R.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - R.1.0 8.2.0 2009-12 RAN#46 R5-096256 0078 1 Addition of test scenario CR to 36.521-3: E-UTRAN FDD - R.1.0 8.2.0 2009-12 RAN#46 R5-096256 0078 1 Addition of test scenario CR to 36.521-3: E-UTRAN FDD - GSM 8.1.0 8.2.0 2009-12 RAN#46 R5-096256 0078 1 Addition of test scenario CR to 36.521-3: E-UTRAN FDD - GSM 8.1.0 8.2.0 2009-12 RAN#46 R5-096265 0078 1 Addition of test scenario CR to 36.521-3: E-UTRAN FDD - GSM 8.1.0 8.2.0 2009-12 RAN#46 R5-096265 0080 -	2009-12	RAN#46	R5-095741	0072	-		8.1.0	8.2.0
2009-12 RAN#46 R5-096145 0074 - Correction CR to 36.521-3: E-UTRAN FDD - FDD Inter R1.0 8.2.0 Frequency Absolute RSRP Accuracy case R1.0 8.2.0 Colored RSRP Accuracy Case R1.0 R1.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 R1.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 R1.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 R2.0 Colored RSRP Accuracy Case R1.0 R2.0 Colored RSRP Accuracy Case R2.0 R2.0 Colored RSP Accuracy Case R2.0								
Frequency Absolute RSRP Accuracy case					-			
Degree Degree Content Degree	2009-12	RAN#46	R5-096145	0074	-		8.1.0	8.2.0
Selection Sele						Frequency Absolute RSRP Accuracy case		
2009-12 RAN#46 R5-096244 0104 1 Addition of new TC to 36.521-3: E-UTRANTDD - UTRANFDD 8.1.0 8.2.0	2009-12	RAN#46	R5-096243	0075	-		8.1.0	8.2.0
Cell re-selection test								
2009-12 RAN#46 R5-096246 0105 Modification of section 4.2.2 in 36.521-3 8.1.0 8.2.0	2009-12	RAN#46	R5-096244	0104	1	Addition of new TC to 36.521-3: E-UTRAN TDD - UTRAN FDD	8.1.0	8.2.0
2009-12 RAN#46 R5-096257 0076 CR to the RA response window's name in Random Access 8.1.0 8.2.0 2009-12 RAN#46 R5-096257 0077 Addition of test scenario CR to 36.521-3: E-UTRAN FDD 8.1.0 8.2.0 UTRAN FDD cell re-selection in fading propagation conditions: UTRA FDD is of lower priority 2009-12 RAN#46 R5-096258 0078 1 Addition of new TC to 36.521-3: E-UTRAN TDD - GSM 8.1.0 8.2.0 2009-12 RAN#46 R5-096268 0078 1 Addition of new TC to 36.521-3: E-UTRAN TDD - GSM 8.1.0 8.2.0 2009-12 RAN#46 R5-096263 0079 1 Add new TC 5.1.6 E-UTRAN TDD - TDD inter frequency 8.1.0 8.2.0 2009-12 RAN#46 R5-096265 0080 - Correction CR to 36.521-3: E-UTRAN TDD - TDD inter frequency 8.1.0 8.2.0 2009-12 RAN#46 R5-096265 0080 - Addition of test scenario CR to 36.521-3: E-UTRAN TDD - B.1.0 8.2.0 2009-12 RAN#46 R5-096267 0081 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - B.1.0 8.2.0 2009-12 RAN#46 R5-096268 0082 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - B.1.0 8.2.0 2009-12 RAN#46 R5-096269 0083 - RRM Update of test case 8.4.1 TDD inter-frequency event triggered reporting 2009-12 RAN#46 R5-096271 0084 - LTE-RF: Update to Annex E Cell Configuration Mapping 8.1.0 8.2.0 2009-12 RAN#46 R5-096272 0085 - Correction CR to 36.521-3: Addition of message contents exceptions for E-UTRAN inter-frequency and inter-RAT Cell Search when DRX is used 2009-12 RAN#46 R5-096274 0087 - Correction CR to 36.521-3: Dotate of PDD Inter-frequency RRC Re-establishment test case 2009-12 RAN#46 R5-096275 0086 - Correction CR to 36.521-3: Dotate of PDD Inter-frequency RRC Re-establishment test case 2009-12 RAN#46 R5-096276 0087 - Correction CR to 36.521-3: Dotate of FDD Inter-frequency RRC Re-establishment test case 2009-12 RAN#46 R5-096276 0087 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event R1.0 8.2.0 2009-12 RAN#46 R5-096276 0								
2009-12 RAN#46 R5-096255 0076 - CR to the RA responsew indow's name in Random Access 8.1.0 8.2.0					-			
Conformance requirements Conformance requirements	2009-12	RAN#46	R5-096247	0106	-		8.1.0	8.2.0
RAN#46	2009-12	RAN#46	R5-096255	0076	-	CR to the RA response window's name in Random Access	8.1.0	8.2.0
UTRAN FDD cell re-selection in fading propagation conditions: UTRA FDD is of lower priority								
UTRA FDD is of lower priority 2009-12 RAN#46 R5-096258 0078 1 Addition of new TC to 36.521-3:E-UTRANTDD - GSM 8.1.0 8.2.0	2009-12	RAN#46	R5-096257	0077	-		8.1.0	8.2.0
UTRA FDD is of lower priority 2009-12 RAN#46 R5-096258 0078 1 Addition of new TC to 36.521-3:E-UTRANTDD - GSM 8.1.0 8.2.0						UTRAN FDD cell re-selection in fading propagation conditions:		
Handover: Unknow n Target Cell								
2009-12 RAN#46 R5-096263 0079 1 Add new TC 5.1.6 E-UTRAN TDD - TDD inter frequency handover: unknown target cell	2009-12	RAN#46	R5-096258	0078	1	Addition of new TC to 36.521-3:E-UTRAN TDD - GSM	8.1.0	8.2.0
handover: unknown target cell						Handover: Unknow n Target Cell		
2009-12 RAN#46 R5-096265 0080 -	2009-12	RAN#46	R5-096263	0079	1	Add new TC 5.1.6 E-UTRAN TDD - TDD inter frequency	8.1.0	8.2.0
and E-UTRA FDD to cdma2000 1xRTT Handover test cases						handover: unknown target cell		
2009-12 RAN#46 R5-096267 0081 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - (GSM Cell Search when DRX is used	2009-12	RAN#46	R5-096265	0800	-	CR to 36.521-3: Update of E-UTRA FDD to HRPD Handover	8.1.0	8.2.0
2009-12 RAN#46 R5-096267 0081 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - (GSM Cell Search when DRX is used						and E-UTRA FDD to cdma2000 1xRTT Handover test cases		
GSM Cell Search when DRX is used 2009-12 RAN#46 R5-096268 0082 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD - UTRAN FDD Cell Search when DRX is used 2009-12 RAN#46 R5-096269 0083 - RRM: Update of test case 8.4.1 TDD inter-frequency event triggered reporting 2009-12 RAN#46 R5-096271 0084 - LTE-RF: Update to Annex E Cell Configuration Mapping 8.1.0 8.2.0 2009-12 RAN#46 R5-096272 0085 - Correction CR to 36.521-3: Addition of message contents exceptions for E-UTRAN inter frequency and inter-RAT Cell Search for when DRX is used 2009-12 RAN#46 R5-096273 0086 - Correction CR to 36.521-3: E-UTRAN FDD - UTRA FDD 8.1.0 8.2.0 Handover case 2009-12 RAN#46 R5-096274 0087 - CR to 36.521-3: Update to FDD Intra-frequency RRC Restablishment test case 2009-12 RAN#46 R5-096275 0088 - CR to 36.521-3: Update to FDD Intra-frequency RRC Restablishment test case 2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRAN TDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event triggered reporting in AWGN case 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to	2009-12	RAN#46	R5-096267	0081	1 -		8.1.0	8.2.0
RAN#46 R5-096268 0082 - Addition of test scenario CR to 36.521-3: E-UTRAN FDD -							1	
UTRAN FDD Cell Search when DRX is used	2009-12	RAN#46	R5-096268	0082	1-		8.1.0	8.2.0
2009-12 RAN#46 R5-096269 0083 - RRM: Update of test case 8.4.1 TDD inter-frequency event triggered reporting 8.1.0 8.2.0 2009-12 RAN#46 R5-096271 0084 - LTE-RF: Update to Annex E Cell Configuration Mapping 8.1.0 8.2.0 2009-12 RAN#46 R5-096272 0085 - Correction CR to 36.521-3: Addition of message contents exceptions for E-UTRAN inter frequency and inter-RAT Cell search for when DRX is used 8.1.0 8.2.0 2009-12 RAN#46 R5-096273 0086 - Correction CR to 36.521-3: E-UTRAN FDD - UTRA FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096274 0087 - CR to 36.521-3: Update to FDD Intra-frequency RRC Reestablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096275 0088 - CR to 36.521-3: Update to FDD Inter-frequency RRC Reestablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRAN TDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0089 - <t< td=""><td> </td><td></td><td>1</td><td> </td><td></td><td></td><td>1</td><td></td></t<>			1				1	
triggered reporting triggered reporting 2009-12 RAN#46 R5-096271 0084 - LTE-RF: Update to Annex E Cell Configuration Mapping 8.1.0 8.2.0 8.1.0 8.2.0	2009-12	RAN#46	R5-096269	0083	 -		8,1.0	8,2.0
2009-12 RAN#46 R5-096271 0084 - LTE-RF: Update to Annex E Cell Configuration Mapping 8.1.0 8.2.0			1 223200					
2009-12 RAN#46 R5-096272 0085 -	2009-12	RAN#46	R5-096271	0084	-		8.1.0	8.2.0
exceptions for E-UTRAN inter frequency and inter-RAT Cell Search for when DRX is used					-			
Search for when DRX is used 2009-12 RAN#46 R5-096273 0086 - Correction CR to 36.521-3: E-UTRAN FDD - UTRA FDD 8.1.0 8.2.0	2000 12	. V (1477-70	1.0 000212	0000			0.1.0	0.2.0
2009-12 RAN#46 R5-096273 0086 - Correction CR to 36.521-3: E-UTRAN FDD - UTRA FDD 8.1.0 8.2.0 2009-12 RAN#46 R5-096274 0087 - CR to 36.521-3: Update to FDD Intra-frequency RRC Restablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096275 0088 - CR to 36.521-3: Update to FDD Inter-frequency RRC Restablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRAN TDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event triggered reporting in AWGN case 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0						Search for when DRX is used		
Handover case	2009-12	RAN#46	R5-096273	0086	 -		8.1.0	8.2.0
2009-12 RAN#46 R5-096274 0087 - CR to 36.521-3: Update to FDD Intra-frequency RRC Reestablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096275 0088 - CR to 36.521-3: Update to FDD Inter-frequency RRC Reestablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRANTDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRANTDD - UTRANTDD event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRANTDD - GSM event triggered reporting in AWGN case 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRANTDD to E-UTRAN 8.1.0 8.2.0			555275					
establishment test case	2009-12	RΔ N#46	R5-096274	0087	l		810	820
2009-12 RAN#46 R5-096275 0088 - CR to 36.521-3: Update to FDD Inter-frequency RRC Reestablishment test case 8.1.0 8.2.0 2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRANTDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRANTDD - UTRANTDD event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRANTDD - GSM event triggered reporting in AWGN case 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRANTDD to E-UTRAN 8.1.0 8.2.0	2003-12	I V LI WITH U	130.030214	0007	1		0.1.0	0.2.0
establishment test case	2000-12	RΔ N#46	R5-096275	0088	 		810	820
2009-12 RAN#46 R5-096276 0107 - Test Case of E-UTRAN TDD to GSM Handover 8.1.0 8.2.0 2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event triggered reporting in AWGN case 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0	2003-12	I V LI WITH U	130.030213	0000	1		0.1.0	0.2.0
2009-12 RAN#46 R5-096296 0089 - Update TC 8.7.1 E-UTRAN TDD - UTRAN TDD event triggered reporting under fading propagation conditions 8.1.0 8.2.0 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event triggered reporting in AWGN case 8.1.0 8.2.0 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0	2000 12	D/V#46	DE 006276	0107	<u> </u>		010	920
triggered reporting under fading propagation conditions 2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event 8.1.0 8.2.0					Ι-			
2009-12 RAN#46 R5-096302 0090 - Correction CR to 36.521-3: E-UTRAN FDD - GSM event 8.1.0 8.2.0	2009-12	rt41V#46	K5-096296	0089	[-		0.1.0	0.2.0
triggered reporting in AWGN case 2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0	0000 10	DA N#40	DE 000000	0000	<u> </u>		0.4.0	0.0.0
2009-12 RAN#46 R5-096303 0091 - Addition of new TC to 36.521-3: E-UTRAN TDD to E-UTRAN 8.1.0 8.2.0	2009-12	KAN#46	R5-096302	0090	-		g.1.0	8.2.0
	2000 42	DA N# 40	DE 000000	0004		Inggered reporting in AWGN case	0.1.0	0.0.0
	2009-12	rt41V#46	KD-U903U3	0091	1-		0.1.0	0.2.0
					<u> </u>	מווא חחו אווט מווא אווט cell search test case	ļ	J

2009-12	RAN#46	R5-096310	0092	-	Addition of test scenario CR to 36.521-3: E-UTRAN FDD - UTRAN FDD Handover: Unknown Target Cell	8.1.0	8.2.0
2009-12	RAN#46	R5-096324	0093	-	Addition of new TC to 36.521-3 E-UTRAN TDD - UTRAN TDD HO test: unknow n target cell	8.1.0	8.2.0
2009-12	RAN#46	R5-096325	0094	-	Addition of test scenario CR to 36.521-3: E-UTRAN FDD - FDD inter frequency Handover test cases: Unknown Target Cell	8.1.0	8.2.0
2009-12	RAN#46	R5-096326	0095	-	Addition of test scenario CR to 36.521-3: E-UTRAN FDD - GSM Handover: Unknow n Target Cell	8.1.0	8.2.0
2009-12	RAN#46	R5-096327	0096	-	Addition of new TC to 36.521-3: E-UTRAN TDD - E-UTRAN TDD and E-UTRAN TDD Inter-frequency event triggered reporting under fading propagation conditions test case	8.1.0	8.2.0
2009-12	RAN#46	R5-096328	0097	-	E-UTRAN FDD Radio Link Monitoring test for Out-of-sync in DRX	8.1.0	8.2.0
2009-12	RAN#46	R5-096329	0098	-	E-UTRAN FDD Radio Link Monitoring test for in-sync in DRX	8.1.0	8.2.0
2009-12	RAN#46	R5-096330	0099	-	E-UTRAN TDD Radio Link Monitoring test for Out-of-sync in DRX	8.1.0	8.2.0
2009-12	RAN#46	R5-096331	0100	-	E-UTRAN TDD Radio Link Monitoring test for in-sync in DRX	8.1.0	8.2.0
2009-12	RAN#46	R5-096332	0101	-	RRM: Update of test case 8.3.1 FDD inter-frequency event triggered reporting	8.1.0	8.2.0
2009-12	RAN#46	R5-096337	0102	-	Correction CR to 36.521-3: E-UTRAN FDD - FDD Handover intra frequency and inter frequency case	8.1.0	8.2.0
2009-12	RAN#46	R5-096340	0103	-	Introduction of uncertainties for RRM test cases 4.2.1 and 4.2.2	8.1.0	8.2.0
2010-03	RAN#47	R5-100130	0108	-	Test Tolerances and alignment with 36.133 for cell re-selection intra frequency cases		8.3.0
2010-03	RAN#47	R5-100132	0109	-	Uncertainties and Test Tolerances for inter frequency cell re- selection	8.2.0	8.3.0
2010-03	RAN#47	R5-100135	0110	-	Clarification of Extreme conditions for RSRP test cases	8.2.0	8.3.0
2010-03	RAN#47	R5-100362	0113	-	CR about the Cell Search Requirements for LTE FDD-FDD/ TDD-TDD Handover to Unknown Target Cell	8.2.0	8.3.0
2010-03	RAN#47	R5-100365	0114	-	CR on updating the handover delay requirements for E- UTRAN TDD - TDD both intra-frequency and inter-frequency handovers	8.2.0	8.3.0
2010-03	RAN#47	R5-100367	0115	-	CR to correct the test requirements of reselection from E- UTRAN FDD/TDD to UTRAN TDD	8.2.0	8.3.0
2010-03	RAN#47	R5-100394	0116	-	Correction of Annex H about measurement performance messages	8.2.0	8.3.0
2010-03	RAN#47	R5-100401	0117	-	RRM Inter frequency cell search updates, TC 8.3.1 and 8.4.1	8.2.0	8.3.0
2010-03	RAN#47	R5-100438	0118	-	Update TC 8.7.1, 8.9.1 and 8.11.4	8.2.0	8.3.0
2010-03	RAN#47	R5-100460	0119	-	Misc update on 521-3	8.2.0	8.3.0
2010-03	RAN#47	R5-100486	0120	-	CR to 36.521-3: Addition of E-UTRA FDD to HRPD Handover: Unknown Target Cell and E-UTRA FDD to cdma2000 1xRTT Handover: Unknown Target Cell test cases	8.2.0	8.3.0
2010-03	RAN#47	R5-100519	0121	-	Correction to RSRP Accuracy test cases	8.2.0	8.3.0
2010-03	RAN#47	R5-100546	0122	-	CR to 36.521-3: Update to E-UTRAN FDD RRC Re- establishment test cases	8.2.0	8.3.0
2010-03	RAN#47	R5-100562	0123	-	CR to 36.521-3: Update LTE RRM test cases with test requirements for extended LTE1500	8.2.0	8.3.0
2010-03	RAN#47	R5-100714	0124	-	Addition of missing Es/Noc parameters in RRM test cases	8.2.0	8.3.0
2010-03	RAN#47	R5-100715	0125	-	Correction to GSM measurement configuration in Annex H.3.1	8.2.0	8.3.0
2010-03 2010-03	RAN#47 RAN#47	R5-100716 R5-100849	0126 0127	-	Update on Annex C for 36.521-3 Text on exclusion of extra delay due to RRC retransmission	8.2.0 8.2.0	8.3.0 8.3.0
2010-03	RAN#47	R5-100849	0127	-	Correction to test iteration procedure in cell re-selection TCs	8.2.0	8.3.0
2010-03	RAN#47	R5-100852	0129	-	DL Mac Padding for RRM TCs	8.2.0	8.3.0
2010-03	RAN#47	R5-100853	0130	-	Update TC 5.1.6 E-UTRAN TDD-TDD inter frequency handover unknown target cell	8.2.0	8.3.0
2010-03	RAN#47	R5-100854	0131	-	New RRM test case, 8.7.3 E-UTRAN TDD SON ANR	8.2.0	8.3.0
2010-03	RAN#47	R5-100859	0132	-	Update TC 8.2.2 E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in	8.2.0	8.3.0
2010-03	RAN#47	R5-100860	0133	-	synchronous cells with DRX Update TC 8.2.1 E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells	8.2.0	8.3.0
2010-03	RAN#47	R5-100861	0134	-	Update TC 8.4.2 E-UTRAN TDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells	8.2.0	8.3.0
2010-03	RAN#47	R5-100862	0135	-	Misc update on test applicability	8.2.0	8.3.0
2010-03	RAN#47	R5-100865	0136	-	CR about corrections of PDSCH Reference Measurement Channels	8.2.0	8.3.0
2010-03	RAN#47	R5-100866	0137	-	CR about OFDMA Channel Noise Generator (OCNG)	8.2.0	8.3.0
2010-03	RAN#47	R5-100873	0138	-	CR to 36.521-3 Rel-8 Introduction of E-UTRAN FDD - FDD	8.2.0	8.3.0
					Intra Frequency Cell Search with DRX when L3 filtering is used		

2010-03	RAN#47	R5-100890	0139	1-	Update to RRMTC: TDD Intra frequency RSRP Accuracy	8.2.0	8.3.0
2010-03	RAN#47	R5-100896	0140	 	Clarification on Time offset between cells	8.2.0	8.3.0
	RAN#47	R5-100897	0141	<u> -</u>	Update to RRMTC:E-UTRAN TDD-TDD cell re-selection	8.2.0	8.3.0
2010-03	RAN#47	R5-100898	0142	-	Update to RRMTC: TDD Inter frequency RSRP Accuracy	8.2.0	8.3.0
2010-03	RAN#47	R5-100900	0143	-	Uncertainties and Test Tolerances for FDD Intra Frequency Absolute RSRP Accuracy	8.2.0	8.3.0
2010-03	RAN#47	R5-100901	0144	-	RRM TTldcch and cell timing change, update of chapter 8	8.2.0	8.3.0
2010-03	RAN#47	-	-	-	Moved to v9.0.0 with no change	8.3.0	9.0.0
2010-06	RAN#48	R5-103105	0145	-	CR to 36.521-3: Update RSRP test cases with band 11 and 21	9.0.0	9.1.0
2010-06	RAN#48	R5-103116	0146	-	Correction of CR conflict for Intra Frequency TDD reselection test	9.0.0	9.1.0
2010-06	RAN#48	R5-103117	0147	-	Reference to TR 36.903 in TS 36.521-3	9.0.0	9.1.0
2010-06	RAN#48	R5-103312	0149	-	Connection diagram for test 8.11.2 (3 cells)	9.0.0	9.1.0
2010-06	RAN#48	R5-103315	0150	-	Correction to connection diagram reference for test 8.10.1 and 8.10.2	9.0.0	9.1.0
2010-06	RAN#48	R5-103330	0151	-	update on test applicability	9.0.0	9.1.0
2010-06	RAN#48	R5-103358	0152	-	Annex Eupdate	9.0.0	9.1.0
2010-06	RAN#48	R5-103496	0153	-	LTE-RRM: Update of test procedure for measurement performance test cases	9.0.0	9.1.0
2010-06	RAN#48	R5-103526	0154	-	CR 36.521-3 on corrections to requirements in Idle Mode	9.0.0	9.1.0
2010-06	RAN#48	R5-103528	0155	-	CR 36.521-3 on correction to InterRAT handover minimum requirements	9.0.0	9.1.0
2010-06	RAN#48	R5-103531	0156	-	CR 36.521-3 on correction to measurement requirements	9.0.0	9.1.0
2010-06	RAN#48	R5-103532	0157	-	CR 36.521-3 on correction to E-UTRA interfrequency cell search requirements	9.0.0	9.1.0
2010-06	RAN#48	R5-103534	0158	-	test requirements	9.0.0	9.1.0
2010-06	RAN#48	R5-103541	0159	-	Addition of test tolerances and system uncertainties for E- UTRAN FDD-FDD HO inter-frequency case	9.0.0	9.1.0
2010-06	RAN#48	R5-103546	0160	-	Addition of test tolerances and system uncertainties for E- UTRAN FDD-FDD intra frequency cell search under fading in asynchronous cells	9.0.0	9.1.0
2010-06	RAN#48	R5-103547	0161	-	Addition of test tolerances and system uncertainties for E- UTRAN FDD-FDD intra frequency cell search under fading in synchronous cells	9.0.0	9.1.0
2010-06	RAN#48	R5-103548	0162	-	Addition of test tolerances and system uncertainties for E- UTRAN TDD-TDD intra frequency cell search under fading in synchronous cells	9.0.0	9.1.0
2010-06	RAN#48	R5-103607	0163	-	Correction to step of physical cell identity change in 4.2.3	9.0.0	9.1.0
2010-06	RAN#48	R5-103608	0164	-	Correction of test mode reference to 36.508	9.0.0	9.1.0
2010-06	RAN#48	R5-103611	0165	-	Correction to the references of exceptional message	9.0.0	9.1.0
2010-06	RAN#48	R5-103612	0166	-	Correction to b2-Threshold1 in the exceptional message	9.0.0	9.1.0
2010-06	RAN#48	R5-103613	0194	-	Correction to Radio Resource Configuration in UE transmit timing and UE timing advance TCs	9.0.0	9.1.0
2010-06	RAN#48	R5-103614	0195	-	Correction to Gap Pattern Id in the exceptional message	9.0.0	9.1.0
2010-06	RAN#48	R5-103615	0196	-	Correction to Measure object and ID in the exceptional messages	9.0.0	9.1.0
2010-06	RAN#48	R5-103658	0197	-	Iteration in cell reselection tests	9.0.0	9.1.0
2010-06	RAN#48	R5-103709	0167	<u> - </u>		9.0.0	9.1.0
2010-06	RAN#48	R5-103724	0168	-	LTE-RRM: CR to E-UTRAN TDD RRC Re-establishment test cases	9.0.0	9.1.0
2010-06 2010-06	RAN#48 RAN#48	R5-103734 R5-103736	0169 0170	-	Test Tolerances and alignment for RLM FDD TC 7.3.1, 7.3.2 Uncertainties and Test Tolerances for Inter Frequency Absolute RSRP Accuracy	9.0.0	9.1.0 9.1.0
2010-06	RAN#48	R5-103737	0171	Ŀ	Uncertainties and Test Tolerances for TC 8.1.3 and 8.2.2	9.0.0	9.1.0
2010-06	RAN#48	R5-103738	0172	-	Uncertainties and Test Tolerances for TC 8.4.1 and 8.4.2	9.0.0	9.1.0
2010-06	RAN#48	R5-103739	0173	-	cases (5.1.1 & 5.1.2)	9.0.0	9.1.0
2010-06	RAN#48	R5-103740	0174	-	accuracy test cases (9.2.3.1 & 9.2.4.1)	9.0.0	9.1.0
2010-06	RAN#48	R5-103741	0175	-	LTE-RRM:CR for Test Tolerances of inter-freq relative RSRQ accuracy test cases (9.2.3.2 & 9.2.4.2)	9.0.0	9.1.0
2010-06	RAN#48	R5-103742	0176	-	Uncertainties and Test Tolerances for Inter Frequency Relative RSRP Accuracy		9.1.0
2010-06	RAN#48	R5-103743	0177	-	LTE-RRM: CR on Test Tolerances for TDD intra-freq absolute RSRP accuracy Test	9.0.0	9.1.0
2010-06	RAN#48	R5-103744	0178	-	LTE-RRM: CR on Test Tolerances for TDD intra-freq relative RSRP accuracy Test case	9.0.0	9.1.0
2010-06	RAN#48	R5-103745	0179	-	Addition of test tolerances and system uncertainties for E- UTRAN TDD-TDD HO inter-frequency case	9.0.0	9.1.0
2010-06	RAN#48	R5-103746	0180	-	Additions to measurement uncertainties and Test Tolerances for E-UTRAN FDD-FDD and TDD-TDD HO inter-frequency	9.0.0	9.1.0

2010-06	RAN#48	R5-103747	0181	-	Additions to measurement uncertainties and Test Tolerances for E-UTRAN FDD-FDD and TDD-TDD intra frequency cell search in Annex F	9.0.0	9.1.0
2010-06	RAN#48	R5-103748	0182	-	Addition of test tolerances and system uncertainties for FDD intra frequency absolute RSRQ accuracy	9.0.0	9.1.0
2010-06	RAN#48	R5-103749	0183	-	Addition of test tolerances and system uncertainties for TDD intra frequency absolute RSRQ accuracy	9.0.0	9.1.0
2010-06	RAN#48	R5-103750	0184	-	Additions to measurement uncertainties and Test Tolerances for FDD and TDD intra frequency absolute RSRQ accuracy in Annex F	9.0.0	9.1.0
2010-06	RAN#48	R5-103758	0185	-	CR on 36.521-3 for corrections of missing Es/Noc parameters in RRM test cases	9.0.0	9.1.0
2010-06	RAN#48	R5-103759	0186	-	Adding new test case 8.11.5 Combined E-UTRAN - EUTRAN FDD and GSM cell search	9.0.0	9.1.0
2010-06	RAN#48	R5-103760	0187	-	Adding new test case 8.11.6 Combined E-UTRAN - EUTRAN TDD and GSM cell search.	9.0.0	9.1.0
2010-06	RAN#48	R5-103761	0188	-	Adding test case 8.7.3, 8.11.5, 8.11.6 to Annex E Cell configuration mapping.	9.0.0	9.1.0
2010-06	RAN#48	R5-103769	0189	-	Adding band 20, 800MHz in EU to TS36.521-3	9.0.0	9.1.0
2010-06	RAN#48	R5-103773	0190	-	Iteration in Handover and Re-establishment test cases	9.0.0	9.1.0
2010-06	RAN#48	R5-103779	0191	-	LTE-RRM: Addition of new TC E-UTRAN FDD -UTRAN FDD CPICH Ec/No absolute accuracy	9.0.0	9.1.0
2010-06	RAN#48	R5-103783	0192	-	Correction to q-RxLevMin for E-UTRAN - GSM cell re-selection	9.0.0	9.1.0
2010-06	RAN#48	R5-103784	0145	-	DL Mac Padding for RRM TCs	9.0.0	9.1.0
2010-06	RAN#48	R5-103105	0146	-	CR to 36.521-3: Update RSRP test cases with band 11 and 21	9.0.0	9.1.0
2010-06	RAN#48	R5-103116	0147	-	Correction of CR conflict for Intra Frequency TDD reselection test	9.0.0	9.1.0
2010-06	RAN#48	R5-103117	0201	-	Reference to TR 36.903 in TS 36.521-3	9.0.0	9.1.0
2010-06	RAN#48	R5-103229n	0149	-	Removal of technical content in 36.521-3 v8.3.0 and substitution with pointer to the next Release	9.0.0	9.1.0
2010-06	RAN#48	R5-103312	0150	-	Connection diagram for test 8.11.2 (3 cells)	9.0.0	9.1.0
2010-06	RAN#48	R5-103315	0151	-	Correction to connection diagram reference for test 8.10.1 and 8.10.2	9.0.0	9.1.0
2010-06	RAN#48	R5-103330	0152	-	update on test applicability	9.0.0	9.1.0
2010-06	RAN#48	R5-103358	0153	-	Annex Eupdate	9.0.0	9.1.0
2010-09	RAN#49	R5-104098	0198	-	PUSCH Scheduling for RRM tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104103	0199	-	Delay exclusion for retransmissions in RRM test cases	9.1.0	9.2.0
2010-09	RAN#49	R5-104108	0200	-	Expiry of contention resolution timer in Contention based PRACH test	9.1.0	9.2.0
2010-09	RAN#49	R5-104160	0201	-	Uncertainties and Test Tolerances for FDD Intra Frequency Relative RSRP Accuracy section 9.1.1.2	9.1.0	9.2.0
2010-09	RAN#49	R5-104230	0202	-	Correction CR to 36.521-3: Update of E-UTRAN TDD-TDD cell re-selection intra frequency case 4.2.2	9.1.0	9.2.0
2010-09	RAN#49	R5-104231	0203	-	Correction CR to 36.521-3: Update of E-UTRAN TDD-TDD cell re-selection inter frequency case 4.2.6		9.2.0
2010-09	RAN#49	R5-104232	0204	-	Correction CR to 36.521-3: Update of E-UTRAN TDD-TDD Handover intra frequency case 5.1.2	9.1.0	9.2.0
2010-09	RAN#49	R5-104233	0205	-	Correction CR to 36.521-3: Update of E-UTRAN TDD-TDD Handover inter frequency case 5.1.4	9.1.0	9.2.0
2010-09	RAN#49	R5-104247	0206	-	Addition of Cell Configuration Mapping for Cell Search Test	9.1.0	9.2.0
2010-09	RAN#49	R5-104248	0207	_	CR to 36.521-3 on Correction to cell search	9.1.0	9.2.0
2010-09	RAN#49	R5-104249	0208		CR to 36.521-3 on Correction to UE Measurement Procedures	9.1.0	9.2.0
2010-09	RAN#49	R5-104250	0209		CR to 36.521-3 on Correction to RRM Cell Search	9.1.0	9.2.0
2010-09	RAN#49	R5-104251	0210	Ŀ	CR to 36.521-3 on Correction to RRM General	9.1.0	9.2.0
2010-09	RAN#49	R5-104260	0211	-	Addition of test tolerances and system uncertainties for E- UTRAN FDD random access tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104261	0212	-	Addition of test tolerances and system uncertainties for E- UTRAN TDD random access tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104262	0213	-	LTE-RRM: Addition of new TC E-UTRAN TDD -UTRAN FDD CPICH Ec/No absolute accuracy	9.1.0	9.2.0
2010-09	RAN#49	R5-104263	0214	-	LTE-RRM: Addition of new TC E-UTRAN TDD -UTRAN FDD CPICH RSCP absolute accuracy	9.1.0	9.2.0
2010-09	RAN#49	R5-104451	0215	-	Test Tolerances and alignment for RLM FDD TC 7.3.3, 7.3.4	9.1.0	9.2.0
2010-09	RAN#49	R5-104452	0216	-	Test Tolerances and alignment for RLM FDD TC 7.3.5, 7.3.6	9.1.0	9.2.0
	RAN#49	R5-104453	0217	-	Test Tolerances and alignment for RLM TDD TC 7.3.7, 7.3.8	9.1.0	9.2.0
2010-09		R5-104456	0218	[-	Uncertainties and Test Tolerances for E-UTRAN FDD Intra- frequency RRC Re-establishment	9.1.0	9.2.0
2010-09 2010-09	RAN#49				inequency into the establishment		
	RAN#49 RAN#49	R5-104460	0219	-	Uncertainties and Test Tolerances for E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions	9.1.0	9.2.0
2010-09 2010-09 2010-09			0220	-	Uncertainties and Test Tolerances for E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions Clarification on the neighbour cell info	9.1.0 9.1.0	9.2.0
2010-09	RAN#49	R5-104460		-	Uncertainties and Test Tolerances for E-UTRAN FDD-FDD Inter-frequency event triggered reporting under fading propagation conditions		

2010-09	RAN#49	R5-104500	0223	-	Correction to 6.1.1 and 6.1.2 of RRC Re-establishment test	9.1.0	9.2.0
					case		
2010-09	RAN#49	R5-104501	0224	-	Maintenance on exceptional messages for Mobility Control Info		9.2.0
2010-09	RAN#49	R5-104521	0225	-	36521-3 General update of sections 00 to 07: missing Introduction references formatting	9.1.0	9.2.0
2010-09	RAN#49	R5-104563	0226	-	Update on exclusion of extra delay due to RRC retransmission	9.1.0	9.2.0
2010-09	RAN#49	R5-104616	0227	-	36.521-3 Correction to test procedure in 8.11.5 and 8.11.6 test cases	9.1.0	9.2.0
2010-09	RAN#49	R5-104625	0228	-	E-UTRAN TDD inter-frequency reselection test	9.1.0	9.2.0
2010-09	RAN#49	R5-104650	0229	-	Clarifications of test requirements in measurement accuracy tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104663	0230	-	36.521-3: Annex B and Annex C update	9.1.0	9.2.0
2010-09	RAN#49	R5-104825	0231	-	Missing cell Identity change step for test cases with unknown cell 2 timing	9.1.0	9.2.0
2010-09	RAN#49	R5-104826	0232	-	Addition of test tolerances and system uncertainties for FDD timing characteristics tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104827	0233	-	Addition of test tolerances and system uncertainties for TDD timing characteristics tests	9.1.0	9.2.0
2010-09	RAN#49	R5-104828	0234	-	Additions to measurement uncertainties and test tolerances for timing characteristics tests in annex F	9.1.0	9.2.0
2010-09	RAN#49	R5-104829	0235	-	Uncertainties and Test Tolerances for E-UTRAN FDD Inter- frequency RRC Re-establishment	9.1.0	9.2.0
2010-09	RAN#49	R5-104830	0236	-	Uncertainties and Test Tolerances for E-UTRAN TDD-TDD inter-frequency Handover with unknown target cell	9.1.0	9.2.0
2010-09	RAN#49	R5-104839	0237	-	36521-3: Editorial update of sections 08	9.1.0	9.2.0
2010-09	RAN#49	R5-104849	0238	 -	Maintenance on the exceptional messages in Ch8 - Annex	9.1.0	9.2.0
2010-09	RAN#49	R5-104855	0239	-	Uncertainties, Test Tolerances and Test Requirements for UE Transmit Timing	9.1.0	9.2.0
2010-09	RAN#49	R5-104856	0240	-	GSM carrier RSSI measurement accuracy in E-UTRAN TDD	9.1.0	9.2.0
2010-09	RAN#49	R5-104859	0241	-	E-UTRAN_to_UTRAN_FDD_reselection	9.1.0	9.2.0
2010-09	RAN#49	R5-104864	0242	-	Applicability of RRM inter-frequency test cases to (narrow) frequency bands	9.1.0	9.2.0
2010-09	RAN#49	R5-104865	0243	-	Maintenance on the exceptional messages in Ch5 - Ch6	9.1.0	9.2.0
2010-09	RAN#49	R5-104866	0244	-	36.521-3: Annex E update	9.1.0	9.2.0
2010-09	RAN#49	R5-104880	0245	-	Correction to E-UTRAN to UTRAN Cell Re-Selection test case	9.1.0	9.2.0
2010-09	RAN#49	R5-104881	0246	-	Redundant information in RRM Random Access Test Requirements	9.1.0	9.2.0
2010-09	RAN#49	R5-104883	0247	-	E-UTRAN TDD to UTRAN FDD Handover	9.1.0	9.2.0
2010-09	RAN#49	R5-104885	0248	-	Cell ID change time and iteration procedure for RRM test cases 4.2.1, 4.2.2	9.1.0	9.2.0
2010-09	RAN#49	R5-104886	0249	-	Cell ID change time for RRM test cases 4.2.3, 4.2.6	9.1.0	9.2.0
2010-09	RAN#49	R5-104887	0250	-	Scrambling code change time for RRM test cases 4.3.1.1, 4.3.4.1, 8.5.2, 8.7.3, 8.11.4	9.1.0	9.2.0
2010-09	RAN#49	R5-104889	0251	-	Iteration procedure for handover and re-establishment test cases	9.1.0	9.2.0
2010-09	RAN#49	R5-104890	0252	-	Correction to cell re-selection interfrequency test case	9.1.0	9.2.0
2010-09	RAN#49	R5-105057	0253	-	Clarification of Radio link monitoring test cases	9.1.0	9.2.0
2010-09	RAN#49	RP-100941	0254	-	Correction of status for RRM test cases and missing information in Annex	9.1.0	9.2.0
-	-	-	-	-	Re-insertion of the ambiguous step 11 of cl. 5.2.2.4.2 according to R5-104825 after email discussion	9.2.0	9.2.1
2010-12	RAN#50	R5-106079	0255	[-	HARQ delay exclusion for HO test: Clarification for UE-DTX-case	9.2.1	9.3.0
2010-12	RAN#50	R5-106080	0256	-	Iteration procedure for inter RAT handover test cases	9.2.1	9.3.0
2010-12	RAN#50	R5-106082	0257	[-	Corrections to event triggered measurement tests using DRX (Clause 8)	9.2.1	9.3.0
2010-12	RAN#50	R5-106083	0258	-	Missing titles in the RRM specification	9.2.1	9.3.0
2010-12	RAN#50	R5-106085	0259	-	Scheduling of System information for RRM tests	9.2.1	9.3.0
2010-12	RAN#50	R5-106086	0260	-	Update of PDCCH aggregation level for channel BW 1,4 MHz	9.2.1	9.3.0
2010-12	RAN#50	R5-106119	0261		CR to 36.521-3: Update LTE RRM test requirements for EUTRA TDD LTE band 41.	9.2.1	9.3.0
2010-12	RAN#50	R5-106313	0262	_	Uncertainties and Test Tolerances for Connected State Mobility test	9.2.1	9.3.0
2010-12	RAN#50	R5-106314	0263	-	Addition to Measurement Uncertainties and Test Tolerances for Connected State Mobility Test in Annex	9.2.1	9.3.0
2010-12	RAN#50	R5-106318	0264	-	Correction to inter-RAT Connected State Mobility test setup	9.2.1	9.3.0
2010-12	RAN#50	R5-106320	0265	_	Correction to Inter-RAT Connected State Mobility test requirements	9.2.1	9.3.0
2010-12	RAN#50	R5-106321	0266	-	Correction to Inter-RAT Connected State Mobility for Alignment	9.2.1	9.3.0
2010-12	RAN#50	R5-106322	0267	-	Correction to Inter-RAT Connected State Mobility test requirements	9.2.1	9.3.0
L	1	1	1	1		L	1

RAN#50	R5-106//18	0268	I_	Addition of SIR7 exceptional massages	921	9.3.0
			-	-	_	9.3.0
			-		-	9.3.0
			<u> </u>			9.3.0
			-			9.3.0
			l	•		9.3.0
				Tests and UE Measurement Performance		
RAN#50	R5-106805	0274	-	Handover intra frequency case		9.3.0
RAN#50	R5-106806	0275	-	Correction to test case 5.1.4 - Update of E-UTRAN TDD-TDD Handover inter frequency case	9.2.1	9.3.0
RAN#50	R5-106807	0276	-	Correction to Inter-RAT UE Measurements Procedures	9.2.1	9.3.0
RAN#50	R5-106808	0277	-	Correction to Inter-RAT UE Measurements Procedures under fading	9.2.1	9.3.0
RAN#50	R5-106810	0278	-		9.2.1	9.3.0
RAN#50	R5-106811	0279	-	Correction to test case 8.2.2	9.2.1	9.3.0
RAN#50	R5-106812	0295	-	Update of RRM OCNG patterns	9.2.1	9.3.0
			-			9.3.0
			-			9.3.0
			-			9.3.0
			-			9.3.0
RAN#50	R5-106833	0284	-	Adding support of inter-band test configuration for RRM inter-	9.2.1	9.3.0
DANHEO	DE 400004	0005	<u> </u>		0.0.4	0.00
			-			9.3.0
						9.3.0
						9.3.0
			-			9.3.0
			-	Random Access Test		9.3.0
			-			9.3.0
RAN#50	R5-106862	0293	-	Correction to DL configuration on Contention Based Random Access Test	9.2.1	9.3.0
RAN#50	R5-106864	0294	-	Update of Annex G for RLM test in DRX	9.2.1	9.3.0
RAN#50	R5-106870	0289	-	Uncertainties and Test Tolerances for UE measurements procedures test	9.2.1	9.3.0
RAN#50	R5-106871	0290	-	Addition to Measurement Uncertainties and Test Tolerances for UE Measurement Procedures test in Annex	9.2.1	9.3.0
RAN#51	R5-110150	0296	-	RRC Re-establishment tests: Corrections to Message contents	9.3.0	9.4.0
RAN#51	R5-110151	0297	-	Radio link monitoring tests: Corrections to Message contents	9.3.0	9.4.0
RAN#51	R5-110155	0298	-	UE Measurements Procedures tests: Test loop	9.3.0	9.4.0
RAN#51	R5-110167	0299	-	Removal of [] from PDSCH and PCFICH/PDCCH/PHICH Measurement Channel references	9.3.0	9.4.0
RAN#51	R5-110348	0300	-		9.3.0	9.4.0
RAN#51	R5-110418	0301	-	Correction to TDD cell re-selection	9.3.0	9.4.0
RAN#51	R5-110419	0302	-		9.3.0	9.4.0
RAN#51	R5-110424	0303	-	Alignment of exception messages for TDD event triggered	9.3.0	9.4.0
RAN#51	R5-110435	0304	 	Modification of message content definition for TC 8.4.1	9.3.0	9.4.0
RAN#51			-		9.3.0	9.4.0
				triggered reporting under fading propagation conditions		9.4.0
				OPTION) cell search in fading propagation conditions		
				reporting in AWGN		9.4.0
			-	triggered reporting under fading propagation conditions		9.4.0
			-	Alignment		9.4.0
			-	Mobility Inter-RAT to UTRAN test		9.4.0
RAN#51	R5-110549	0312	-	Uncertainties and Test Tolerances for Connected State Mobility Inter-RAT to GSM unknown test	9.3.0	9.4.0
RAN#51	R5-110584	0314	-	Correction to gap pattern ID in test case 5.1.4	9.3.0	9.4.0
RAN#51	R5-110586	0315	-	Clarification to 1.4 MHz testing and applicability in test case 7.1.1	9.3.0	9.4.0
RAN#51	R5-110588	0316	-	Test time limit correction for DRX=40ms in test case 8.1.3	9.3.0	9.4.0
RAN#51	R5-110863	0330	-	Higher SNR on event triggered measurement tests	9.3.0	9.4.0
RAN#51	R5-110866	0311	-		9.3.0	9.4.0
				for Connected State Mobility Inter-RAT to UTRAN test in Annex		
	RAN#50 RAN#51 RAN#51	RAN#50 R5-106451 RAN#50 R5-106455 RAN#50 R5-106456 RAN#50 R5-106483 RAN#50 R5-106493 RAN#50 R5-106805 RAN#50 R5-106806 RAN#50 R5-106807 RAN#50 R5-106807 RAN#50 R5-106808 RAN#50 R5-106808 RAN#50 R5-106810 RAN#50 R5-106811 RAN#50 R5-106811 RAN#50 R5-106812 RAN#50 R5-106829 RAN#50 R5-106830 RAN#50 R5-106831 RAN#50 R5-106831 RAN#50 R5-106833 RAN#50 R5-106833 RAN#50 R5-106833 RAN#50 R5-106835 RAN#50 R5-106836 RAN#50 R5-106836 RAN#50 R5-106857 RAN#50 R5-106857 RAN#50 R5-106862 RAN#50 R5-106862 RAN#50 R5-106870 RAN#50 R5-106870 RAN#50 R5-106871 RAN#50 R5-106871 RAN#51 R5-110150 RAN#51 R5-110151 RAN#51 R5-110155 RAN#51 R5-110448 RAN#51 R5-110448 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110443 RAN#51 R5-110446 RAN#51 R5-110586 RAN#51 R5-110586	RAN#50 R5-106451 0269 RAN#50 R5-106455 0270 RAN#50 R5-106456 0271 RAN#50 R5-106456 0271 RAN#50 R5-106483 0272 RAN#50 R5-106493 0273 RAN#50 R5-106805 0274 RAN#50 R5-106805 0274 RAN#50 R5-106806 0275 RAN#50 R5-106806 0275 RAN#50 R5-106807 0276 RAN#50 R5-106810 0278 RAN#50 R5-106810 0278 RAN#50 R5-106811 0279 RAN#50 R5-106811 0279 RAN#50 R5-106812 0295 RAN#50 R5-106812 0295 RAN#50 R5-106831 0282 RAN#50 R5-106832 0283 RAN#50 R5-106833 0284 RAN#50 R5-106834 0285 RAN#50 R5-106834 0285 RAN#50 R5-106836 0287 RAN#50 R5-106836 0287 RAN#50 R5-106836 0287 RAN#50 R5-106857 0291 RAN#50 R5-106862 0293 RAN#50 R5-106864 0294 RAN#50 R5-106864 0294 RAN#50 R5-106867 0291 RAN#50 R5-106864 0294 RAN#50 R5-106871 0290 RAN#50 R5-106871 0290 RAN#51 R5-110151 0297 RAN#51 R5-110151 0297 RAN#51 R5-110151 0297 RAN#51 R5-110438 0300 RAN#51 R5-110439 0302 RAN#51 R5-110439 0302 RAN#51 R5-110439 0302 RAN#51 R5-110439 0302 RAN#51 R5-110449 0303 RAN#51 R5-110449 0302 RAN#51 R5-110449 0302 RAN#51 R5-110449 0303 RAN#51 R5-110449 0302 RAN#51 R5-110449 0303 RAN#51 R5-110449 0302 RAN#51 R5-110449 0302 RAN#51 R5-110584 0314 RAN#51 R5-110584 0314 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316 RAN#51 R5-110588 0316	RAN#50 R5-106451 0269 - RAN#50 R5-106455 0270 - RAN#50 R5-106456 0271 - RAN#50 R5-106483 0272 - RAN#50 R5-106493 0273 - RAN#50 R5-106493 0273 - RAN#50 R5-106493 0273 - RAN#50 R5-106805 0274 - RAN#50 R5-106806 0275 - RAN#50 R5-106807 0276 - RAN#50 R5-106808 0277 - RAN#50 R5-106810 0278 - RAN#50 R5-106811 0279 - RAN#50 R5-106811 0279 - RAN#50 R5-106812 0295 - RAN#50 R5-106812 0295 - RAN#50 R5-106813 0281 - RAN#50 R5-106830 0281 - RAN#50 R5-106831 0282 - RAN#50 R5-106831 0282 - RAN#50 R5-106831 0282 - RAN#50 R5-106832 0283 - RAN#50 R5-106834 0285 - RAN#50 R5-106836 0287 - RAN#50 R5-106836 0287 - RAN#50 R5-106864 0285 - RAN#50 R5-106869 0292 - RAN#50 R5-106869 0292 - RAN#50 R5-106869 0292 - RAN#50 R5-106860 0288 - RAN#50 R5-106860 0287 - RAN#50 R5-106861 0294 - RAN#50 R5-106861 0294 - RAN#50 R5-106870 0289 - RAN#50 R5-106871 0290 - RAN#50 R5-106871 0290 - RAN#51 R5-110150 0296 - RAN#51 R5-110150 0296 - RAN#51 R5-110448 0300 - RAN#51 R5-110449 0302 - RAN#51 R5-110449 0302 - RAN#51 R5-110449 0303 - RAN#51 R5-110445 0306 - RAN#51 R5-110445 0306 - RAN#51 R5-110445 0307 - RAN#51 R5-110586 0316 - RAN#51 R5-110586 0316 - RAN#51 R5-110586 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 - RAN#51 R5-110588 0316 -	RANIBSO RS-108451 0269	RANNS0 RS-106451 0268 Correction to UE transmit timing TC 9.2.1

2011-03 RANP51 RS-110902 0317 CR to 9.6.271-3: Update LTF RRM test requirements for 9.3.0 9.4.0 2011-03 RANP51 RS-110904 0319 MIMO Correlation to exception messages in 5.3.1 HRPD HHO test 9.3.0 9.4.0 2011-03 RANP51 RS-110904 0319 MIMO Correlation scenario for RIM test case 9.3.0 9.4.0 2011-03 RANP51 RS-110907 0321 Re-ordering of Time periods, definition of uncertainties, and 9.3.0 9.4.0 2011-03 RANP51 RS-110910 0322 Re-ordering of Time periods, definition of uncertainties, and 9.3.0 9.4.0 2011-03 RANP51 RS-110910 0322 RANP51 RS-110910 0323 RANP51 RS-110910 0323 RANP51 RS-110910 0324 RANP51 RS-110912 0324 RANP51 RS-110912 0324 RANP51 RS-110912 0324 RANP51 RS-110927 0325 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110927 0325 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110929 0325 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110929 0325 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110929 0325 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110930 0328 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110930 0328 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 2, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 12, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 12, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 12, 3.0 9.4.0 RANP51 RS-110930 0329 Corrections to RRM Tics 17, 12, 12, 3.0 9.4.0 RANP51 RS-110930 0333 Correction to RRM Tics 18, 12, 12, 12, 12, 12, 12, 12, 12, 12, 12	2011-03	RAN#51	R5-110868	0313	-	Addition to Measurement Uncertainties and Test Tolerances for Connected State Mobility Inter-RAT to GSM unknown test in Annex	9.3.0	9.4.0
2011-03 RAN#51 RS-110905 3319 . MIM/O Correlation scenario for RLM test cases 9.3.0 9.4.0 2011-03 RAN#51 RS-110907 3221 . Re-ordering of Time periods, definition of uncertainties, and 3.0 9.4.0 2011-03 RAN#51 RS-110910 3222 . Updated fest Tolerances for RRM test cases 7.1.1 + 7.1.2 9.3.0 9.4.0 2011-03 RAN#51 RS-110911 3223 . Uncertainties and fest Tolerances for Connected State 3.0 9.4.0 2011-03 RAN#51 RS-110912 3224 . Addition to Measurement Lineariaties and Test Tolerances for Connected State 3.0 9.4.0 2011-03 RAN#51 RS-110927 3325 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110927 3325 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110928 3226 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to test cases about E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110930 3229 . Corrections to Total related to E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110936 3331 . Corrections to Total related to E-UTRAN FIDD-TUTRAN 9.3.0 9.4.0 2011-03 RAN#51 RS-110956 3333 . Correction to Total Rank Fidd Related	2011-03	RAN#51	R5-110902	0317	-	CR to 36.521-3: Update LTE RRM test requirements for	9.3.0	9.4.0
2011-03 RANNS1 RS-110907 0320 Enabling HARQ for section 8 and 9 RRM Tests 9.3.0 9.4.0 2011-03 RANNS1 RS-110910 0322 Light Control of Time periods, definition of uncertainties, and addition of Test Tolerances for RRM test case 4.3.1.1 9.3.0 9.4.0 2011-03 RANNS1 RS-110910 0322 Light Control of Time periods, definition of Lordon Factor (Control of Lordon Factor) 1.1	2011-03	RAN#51	R5-110903	0318	-	Correction to exception messages in 5.3.1 HRPD HHO test	9.3.0	9.4.0
2011-03 RAN#51 R5-110907 0221	2011-03	RAN#51	R5-110904	0319	-	MIMO Correlation scenario for RLM test cases	9.3.0	9.4.0
2011-03 RAN#51 R5-110910 3322 Uncertainties and Test Tolerances for RRM test cases 4.3.1.1 3.3.0 9.4.0	2011-03	RAN#51	R5-110905	0320	-	Enabling HARQ for section 8 and 9 RRM Tests	9.3.0	9.4.0
2011-03 RANMS1 RS-110910 0322 . Updated fest Tolerances for RRM fest cases 7.1.1 + 7.1.2 9.3.0 9.4.0 .	2011-03	RAN#51	R5-110907	0321	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110912 0323 	2011-03	RAN#51	R5-110910	0322	-		9.3.0	9.4.0
2011-03 RAN#61 R5-110927 0325 - Addition to Measurement Uncertainties and Test Tolerances 3.0 9.40	2011-03	RAN#51	R5-110911	0323	-		9.3.0	9.4.0
1011-03 RANW51 R5-11092F 3925 Corrections to IRRMT 08.11.8, 12 and 8.1 3 3.0	2011-03	RAN#51	R5-110912	0324	<u> </u>		930	940
2011-03 RAN#S1 RS-11092F 0325 Corrections to RRMTC 8.1.1, 8.1.2 and 8.1.3 9.3.0 9.4.0	2011 00		1.0012				0.0.0	00
Integuency measurement 8.3.1, 8.3.2 and 8.3.3	2011-03	RAN#51	R5-110927	0325	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110929 0327 Corrections to TCs related to E-UTRAN FDD- UTRAN 0.3.0 0.4.0	2011-03	RAN#51	R5-110928	0326	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110930 0328 UIE Measurement procedures tests: Corrections to Message 0.3.0 9.4.0	2011-03	RAN#51	R5-110929	0327	-	Corrections to TCs related to E-UTRAN FDD - UTRAN	9.3.0	9.4.0
2011-03 RAN#51 R5-110946 0331 Uncertainties and Test Tolerances for RRM test case 4.3.12 0.3.0 9.4.0	2011-03	RAN#51	R5-110930	0328	-	UE Measurement procedures tests: Corrections to Message	9.3.0	9.4.0
Display	2011 02	DA N#E1	DE 110021	0220			0.2.0	0.4.0
Display				l l	Ι-			
2011-03 RAN#51 R5-110956 0333 - Modification of test case 5.1.6 - E-UTRAN TDD-TDD inter 9.3.0 9.4.0 frequency handover; unknown target cell 2011-03 RAN#51 R5-110957 0334 - LTE RRM reference to state 3\hat{3}\$ in 36.521-3 9.3.0 9.4.0 2011-03 RAN#51 R5-110959 0336 - Certosin to RRM testes for Alignment 9.3.0 9.4.0 2011-03 RAN#51 R5-110959 0336 - CR to 36.521-3; E-UTRAN FDD - UTRA FDD CPICH RSCP 9.3.0 9.4.0 absolute accuracy test case 2011-03 RAN#51 R5-110960 0337 - CR to 36.521-3; E-UTRAN FDD - UTRA FDD PICH RSCP 9.3.0 9.4.0 2011-03 RAN#51 R5-110961 0338 - CR to 36.521-3; E-UTRAN FDD-FDD Inter-frequency and frequency event triggered reporting test case 2011-03 RAN#51 R5-110962 0339 - Certosin to RTM riggered reporting test case 2011-03 RAN#51 R5-110963 0340 - Correction to Exception messages in Radio Link Monitoring 9.3.0 9.4.0 UTRAN FDD event triggered reporting test case 2011-03 RAN#51 R5-110964 0341 - Correction to TC 8.4.2; E-UTRAN TDD-TDD Inter-frequency event triggered reporting test case 2011-03 RAN#51 R5-110964 0341 - Correction to TC 8.7.3; E-UTRAN TDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells 2011-03 RAN#51 R5-110965 0342 - Correct the message definitions related to the RSRP and 9.3.0 9.4.0 ANR cell search reporting under AWGN propagation conditions 2011-03 RAN#51 R5-110965 0342 - Correct the message definitions related to the RSRP and 9.3.0 9.4.0 RSRQ performance testing 2011-03 RAN#51 R5-110980 0345 - Correction to TC 8.7.2; E-UTRAN TDD - CSM Event triggered 9.3.0 9.4.0 reporting when DRX is used in AWGN 2011-03 RAN#51 R5-110980 0345 - Correction to TC 8.10.1; E-UTRAN TDD - CSM Event triggered 9.3.0 9.4.0 reporting when DRX is used in AWGN 2011-03 RAN#51 R5-110985 0352 - R5-110216 0355 - Correction to TC 8.10.2; E-UTRAN TDD - CSM Event triggered 9.3.0 9.4.0 reporting when DRX is used in AWGN 2011-03 RAN#51 R5-110985 0352 - R5-110216 0355 - Correction to TC 8.10.2; E-UTRAN TDD - CSM Event triggered 9.3.0 9.4.0 reporting when		_			-			
Post-10957 Post-10957 Post-10958 Pos					_	and 4.4.2		
2011-03 RAN#51 R5-110957 0334 - LTE RRM reference to state 3A in 36.521-3 9.3.0 9.4.0 2011-03 RAN#51 R5-110959 0336 - CR to 36.521-3: E-UTRAN FDD - UTRA FDD CPICH RSCP 9.3.0 9.4.0 2011-03 RAN#51 R5-110960 0337 - CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Interfrequency event triggered reporting test case 0339 - CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Interfrequency event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting test case 0340 UTRAN FDD event triggered reporting when DRX is used under fading propagation conditions in synchronous cells 0340 UTRAN FDD event triggered reporting under AWGN propagation 0340 UTRAN FDD event triggered reporting under AWGN propagation 0340 UTRAN FDD event triggered reporting under AWGN propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRAN FDD event propagation 0340 UTRA	2011-03	RAN#51	R5-110956	0333	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110959 0336 - CR to 36.521-3: E-UTRAN FDD- UTRAN FDD- CPICH RSCP 9.3.0 9.4.0 absolute accuracy test case 2011-03 RAN#51 R5-110960 0337 - CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Interfrequency event triggered reporting test case 2011-03 RAN#51 R5-110961 0338 - CR to 36.521-3: E-UTRAN FDD-FDD Interfrequency and UTRAN FDD event triggered reporting test case 2011-03 RAN#51 R5-110962 0339 - Correction to exception messages in Radio Link Monitoring 9.3.0 9.4.0 2011-03 RAN#51 R5-110963 0340 - Correction to TC 8.4.2: E-UTRAN FDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells 2011-03 RAN#51 R5-110964 0341 - Corrections to TC 8.7.3: E-UTRAN TDD-TDD Inter-frequency event triggered reporting under AWGN propagation conditions 2011-03 RAN#51 R5-110965 0342 - Correct the message definitions related to the RSRP and RSRQ performance testing 2011-03 RAN#51 R5-110966 0343 - Update of RRN test 8.5.2 FDD SON 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-06 RAN#52 R5-110985 0353 -	2011-03	RAN#51	R5-110957	0334	-		9.3.0	9.4.0
absolute accuracy test case 2011-03 RAN#51 R5-110960 0337 CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Inter- 9.3.0 9.4.0 1.	2011-03	RAN#51	R5-110958	0335	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110960 0337 CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Inter- 93.0 9.4.0 2011-03 RAN#51 R5-110961 0338 CR to 36.521-3: E-UTRAN FDD-FDD Inter-frequency and UTRAN FDD event triggered reporting test case UTRAN FDD event triggered reporting test case 0339 Correction to reception messages in Radio Link Monitoring 9.3.0 9.4.0 2011-03 RAN#51 R5-110963 0340 Correction to TC 8.4.2: E-UTRAN TDD-TDD Inter-frequency 9.3.0 9.4.0 2011-03 RAN#51 R5-110964 0341 Corrections to TC 8.4.2: E-UTRAN TDD-TDD Inter-frequency 9.3.0 9.4.0 2011-03 RAN#51 R5-110965 0342 Correction to TC 8.4.2: E-UTRAN TDD-UTRAN TDD SON ANR cell search reporting when DRX is used under fading propagation conditions in synchronous cells 2011-03 RAN#51 R5-110965 0342 Corrections to TC 8.7.3: E-UTRAN TDD-UTRAN TDD SON ANR cell search reporting under AWGN propagation 2011-03 RAN#51 R5-110966 0343 Update to RRING testing 2011-03 RAN#51 R5-110966 0343 Update to RRING testing 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-06 RAN#52 R5-11216 0355 Correction to TC 8.7.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-06 RAN#52 R5-112152 0357 RADIO REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORTED REPORT	2011-03	RAN#51	R5-110959	0336	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110961 0338 CR to 36.521-3: E UTRAN FDD-FDD Inter-frequency and UTRAN FDD event triggered reporting test case 2011-03 RAN#51 R5-110963 0340 Correction to exception messages in Radio Link Monitoring 9.3.0 9.4.0 2011-03 RAN#51 R5-110963 0340 Correction to TC 8.4.2: E-UTRAN TDD-TDD Inter-frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells 2011-03 RAN#51 R5-110964 0341 Correction to TC 8.7.3: E-UTRAN TDD-UTRAN TDD SON 9.3.0 9.4.0 ANR cell search reporting under AWGN propagation conditions in synchronous cells 2011-03 RAN#51 R5-110965 0342 Correct the message definitions related to the RSRP and 9.3.0 9.4.0 2011-03 RAN#51 R5-110966 0343 Update of RRM test 8.5.2 FDD SON 9.3.0 9.4.0 2011-03 RAN#51 R5-110974 0344 PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110981 0346 Update to TC 8.8.2: E-UTRAN TDD - GSM event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110982 0347 Correction to TC 8.8.2: E-UTRAN TDD - GSM event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110982 0347 Correction to TC 8.8.2: E-UTRAN TDD - GSM event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110982 0346 Update to TC 8.7.2: E-UTRAN TDD - GSM event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110980 0352 R5-110218 R5-110980 0353 R5-110218 R5-110980 0353 R5-110218 R5-110980 0354 Uncertainties and Test Tolerances for RRM test case 8.7.1 9.4.0 9.5.0 2011-06 RAN#52 R5-112152 0355 Uncertainties and Test Tolerances for RRM test case 8.7.1 9.4.0 9.5.0 2	2011-03	RAN#51	R5-110960	0337	-	CR to 36.521-3: Addition of Multiple E-UTRAN FDD-FDD Inter-	9.3.0	9.4.0
2011-03 RAN#51 R5-110962 0339 - Correction to exception messages in Radio Link Monitoring 9.3.0 9.4.0	2011-03	RAN#51	R5-110961	0338	-	CR to 36.521-3: E-UTRAN FDD-FDD Inter-frequency and	9.3.0	9.4.0
Test Correction to TC 8.4.2: E-UTRANTDD-TDD Inter-frequency 9.3.0 9.4.0 event triggered reporting when DRX is used under fading propagation conditions in synchronous cells	0044.00	DANUEA	DE 440000	0000			0.0.0	0.4.0
event triggered reporting when DRX is used under fading propagation conditions in synchronous cells					-	Test		
2011-03 RAN#51 R5-110964 0341 - Corrections to TC 8.7.3: E-UTRANTDD - UTRANTDD SON 9.3.0 9.4.0 ANR cell search reporting under AWGN propagation conditions	2011-03	RAN#51	R5-110963	0340	-	event triggered reporting when DRX is used under fading	9.3.0	9.4.0
2011-03	2011-03	RAN#51	R5-110964	0341	-	Corrections to TC 8.7.3: E-UTRAN TDD - UTRAN TDD SON ANR cell search reporting under AWGN propagation	9.3.0	9.4.0
2011-03 RAN#51 R5-110966 0343 - Update of RRM test 8.5.2 FDD SON 9.3.0 9.4.0	2011-03	RAN#51	R5-110965	0342	-	Correct the message definitions related to the RSRP and	9.3.0	9.4.0
2011-03 RAN#51 R5-110980 0344 - PUSCH scheduling: Correction for considering DRX 9.3.0 9.4.0	2011-03	RAN#51	R5-110966	0343	-		9.3.0	9.4.0
2011-03 RAN#51 R5-110981 0345 Correction to TC 8.8.2: E-UTRAN FDD - GSM Event triggered reporting when DRX is used in AWGN 9.3.0 9.4.0				0344	-		9.3.0	9.4.0
2011-03	2011-03	RAN#51	R5-110980	0345	-		9.3.0	9.4.0
reporting in AWGN 2011-03 RAN#51 R5-110982 0347 - Corrections to TC 8.10.2: E-UTRAN TDD-GSM event triggered 9.3.0 9.4.0 2011-03 RAN#51 R5-110983 0348 - Modification to TC 8.7.2: E-UTRAN TDD to UTRAN 1.28Mcps 7.2011-03 RAN#51 R5-110995 0352 - Radio link monitoring test 7.3.4: Minor correction to the test 9.3.0 9.4.0 2011-03 RAN#51 R5-110996 0353 - Radio link monitoring tests: Corrections to the test procedure 9.3.0 9.4.0 2011-06 RAN#52 R5-112124 0354 - Uncertainties and Test Tolerances for RRM test case 8.7.1 9.4.0 9.5.0 2011-06 RAN#52 R5-112128 0356 - Uncertainties and Test Tolerances for RRM test case 8.7.2 9.4.0 9.5.0 2011-06 RAN#52 R5-112152 0357 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112153 0358 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s 4.2: Introduction of time duration TO 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0360 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0360 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0360 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112135 0360 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112135 0360 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112135 0360 - RAM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112134 0365 - RAM TC-s clause 8: Reference to t	2011-03	RAN#51	R5-110981	0346	<u> </u>	reporting when DRX is used in AWGN		940
reporting when DRX is used in AWGN 2011-03 RAN#51 R5-110983 0348 - Modification to TC 8.7.2: E-UTRAN TDD to UTRAN 1.28Mcps D3.0						reporting in AWGN		
TDD cell search when DRX is used in fading propagation conditions 2011-03 RAN#51 R5-110995 0352 - Radio link monitoring test 7.3.4: Minor correction to the test procedure 9.3.0 9.4.0 2011-03 RAN#51 R5-110996 0353 - Radio link monitoring tests: Corrections to the test procedure 9.3.0 9.4.0 2011-06 RAN#52 R5-112124 0354 - Uncertainties and Test Tolerances for RRM test case 8.7.1 9.4.0 9.5.0 2011-06 RAN#52 R5-112126 0355 - Uncertainties and Test Tolerances for RRM test case 8.7.2 9.4.0 9.5.0 2011-06 RAN#52 R5-112128 0356 - Uncertainties and Test Tolerances for RRM test cases 9.4.0 9.5.0 8.8.1+8.10.1 2011-06 RAN#52 R5-112152 0357 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112153 0358 - RRM TC 4.2.6: Introduction of time duration TO 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0						reporting when DRX is used in AWGN		
requirement	2011-03	RAN#51	R5-110983	0348	-	TDD cell search when DRX is used in fading propagation	9.3.0	9.4.0
2011-06 RAN#52 R5-112124 0354 - Uncertainties and Test Tolerances for RRM test case 8.7.1 9.4.0 9.5.0 2011-06 RAN#52 R5-112126 0355 - Uncertainties and Test Tolerances for RRM test case 8.7.2 9.4.0 9.5.0 2011-06 RAN#52 R5-112128 0356 - Uncertainties and Test Tolerances for RRM test cases 9.4.0 9.5.0 2011-06 RAN#52 R5-112152 0357 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112153 0358 - RRM TC 4.2.6: Introduction of time duration T0 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the 19.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 19.4.0 9.5.0 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 19.4.0 9.5.0				0352	-	requirement		
2011-06 RAN#52 R5-112126 0355 - Uncertainties and Test Tolerances for RRM test case 8.7.2 9.4.0 9.5.0 2011-06 RAN#52 R5-112128 0356 - Uncertainties and Test Tolerances for RRM test cases 9.4.0 9.5.0 2011-06 RAN#52 R5-112152 0357 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112153 0358 - RRM TC 4.2.6: Introduction of time duration T0 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the est loop 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 9.4.0 9.5.0 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0					-			
2011-06 RAN#52 R5-112128 0356 - Uncertainties and Test Tolerances for RRM test cases 8.8.1+8.10.1 9.4.0 9.5.0 2011-06 RAN#52 R5-112152 0357 - RRM TC-s 4.2: Transition between time intervals 9.4.0 9.5.0 2011-06 RAN#52 R5-112153 0358 - RRM TC 4.2.6: Introduction of time duration T0 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the est loop 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell p.4.0 9.5.0 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0					<u> -</u>			
8.8.1+8.10.1					<u> -</u>			
2011-06 RAN#52 R5-112153 0358 - RRM TC 4.2.6: Introduction of time duration T0 9.4.0 9.5.0 2011-06 RAN#52 R5-112155 0359 - RRM TC-s clause 8: Reference to the state 3A / 3A-RF in the test loop 9.4.0 9.5.0 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell p.4.0 9.5.0 reselection in fading propagation conditions: UTRA TDD is of low er priority 100 er priority 9.4.0 9.5.0 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0						8.8.1+8.10.1		
2011-06				l l	Ŀ			
test loop 2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 9.4.0 9.5.0 reselection in fading propagation conditions: UTRA TDD is of low er priority 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0					-			
2011-06 RAN#52 R5-112185 0360 - Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell 9.4.0 9.5.0 reselection in fading propagation conditions: UTRA TDD is of low er priority 2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0	2011-06	RAN#52	R5-112155	0359	-		9.4.0	9.5.0
2011-06 RAN#52 R5-112314 0365 - Correction to E-UTRAN FDD - UTRAN FDD cell re-selection 9.4.0 9.5.0	2011-06	RAN#52	R5-112185	0360	-	Addition of new RRM TC 4.3.4.3: EUTRA TDD-UTRA TDD cell reselection in fading propagation conditions: UTRA TDD is of	9.4.0	9.5.0
IMPOULTED/A LINE OF CONCORDOR OF CONCORDE	2011-06	RAN#52	R5-112314	0365	-		9.4.0	9.5.0

2011-06	RAN#52	R5-112315	0366	-	Correction to E-UTRA FDD-high UTRA FDD inter RAT cell reselection test case	9.4.0	9.5.0
2011-06	RAN#52	R5-112316	0367	-	Correction to E-UTRAN TDD-UTRAN TDD cell search reporting for SON ANR in AWGN propagation conditions	9.4.0	9.5.0
2011-06	RAN#52	R5-112317	0368	-	Correction on test cases of E-UTRA to UTRA cell reselection in idle state	9.4.0	9.5.0
2011-06	RAN#52	R5-112318	0369	-	Correction to E-UTRAN TDD - UTRAN TDD test case in 36.521-3	9.4.0	9.5.0
2011-06	RAN#52	R5-112418	0370	-	Update of 4.3.1.3 E-UTRA-UTRA reselection test case	9.4.0	9.5.0
2011-06	RAN#52	R5-112421	0371	-	Correction to 6.1 RRC Re-establishment test case	9.4.0	9.5.0
2011-06	RAN#52	R5-112423	0372	-	Maintenance on Message contents in 8.5.3	9.4.0	9.5.0
2011-06	RAN#52	R5-112424	0373	-	Correction to Annex H.3.3 for Inter-RAT E-UTRAN - HRPD handover	9.4.0	9.5.0
2011-06	RAN#52	R5-112454	0374	-	Wrong references into statistical annex	9.4.0	9.5.0
2011-06	RAN#52	R5-112457	0375	-	References into connection diagrams in 36.508,Annex A	9.4.0	9.5.0
2011-06	RAN#52	R5-112470	0376	-	Misalignment in Meas Gap configuration	9.4.0	9.5.0
2011-06	RAN#52	R5-112475	0377	-	Band 20 missing in section 9 test cases	9.4.0	9.5.0
2011-06	RAN#52	R5-112533	0378	 -		9.4.0	9.5.0
					Inter-RAT TDD to GSM test		
2011-06	RAN#52	R5-112536	0379	-	Addition to Measurement Uncertainties and Test Tolerances	9.4.0	9.5.0
					for connected state mobility Inter-RAT TDD to GSM test in Annex		
2011-06	RAN#52	R5-112543	0380	-	Uncertainties and Test Tolerances for connected state mobility Inter-RAT TDD to GSM unknown test	9.4.0	9.5.0
2011-06	RAN#52	R5-112544	0381	<u> </u>	Addition to Measurement Uncertainties and Test Tolerances	9.4.0	9.5.0
					for connected state mobility Inter-RAT TDD to GSM unknow n test in Annex		
2011-06	RAN#52	R5-112546	0382	-	Uncertainties and Test Tolerances for Inter-RAT to UTRAN event triggered reporting under fading test	9.4.0	9.5.0
2011-06	RAN#52	R5-112554	0383	-	Uncertainties and Test Tolerances for Inter-RAT to GSM event triggered when DRX is used in AWGN tests	9.4.0	9.5.0
2011-06	RAN#52	R5-112555	0384	-	Addition to Measurement Uncertainties and Test Tolerances for Inter-RAT to GSM event triggered when DRX is used in	9.4.0	9.5.0
2011-06	RAN#52	R5-112734	0385	-	AWGN tests in Annex Addition of Band 24 to section 9.1 and 9.2, RSRP and RSRQ measurement performance requirements	9.4.0	9.5.0
2011-06	RAN#52	R5-112741	0363	 	Uncertainties and Test Tolerances for RRM test case 10.3.1	9.4.0	9.5.0
2011-06	RAN#52	R5-112742	0364	l	Uncertainties and Test Tolerances for RRM test case 9.3.2	9.4.0	9.5.0
2011-06	RAN#52	R5-112745	0394	-	Completing for E-UTRAN TDD-UTRAN TDD cell reselection_UTRA is of lower priority	9.4.0	9.5.0
2011-06	RAN#52	R5-112746	0395	-		9.4.0	9.5.0
2011-06	RAN#52	R5-112803	0386	-	Addition to Measurement Uncertainties and Test Tolerances for Inter-RAT to UTRAN event triggered reporting under fading test in Annex	9.4.0	9.5.0
2011-06	RAN#52	R5-112815	0387	-	Correction to test frequency references in RRM initial condition	9.4.0	9.5.0
2011-06	RAN#52	R5-112817	0388	-	RRM TC-s 8.1.1, 8.1.2, 8.1.3, 8.2.1, 8.2.2: Changing SNR for serving cell	9.4.0	9.5.0
2011-06	RAN#52	R5-112818	0389	-	RRM TC 9.6.2: Overall corrections	9.4.0	9.5.0
2011-06	RAN#52	R5-112819	0390	-	CR for 9.4 UTRA FDD measurement accuracy	9.4.0	9.5.0
2011-06	RAN#52	R5-112820	0391	ļ-	Add test frequencies for bands 42, 43 (3500MHz)	9.4.0	9.5.0
2011-06	RAN#52	R5-112849	0398	ļ-	Update of clause 3A.3 RRM test configuration	9.4.0	9.5.0
2011-06	RAN#52	R5-112853	0399	ļ-	Correction to inconsistent test procedures in RRM	9.4.0	9.5.0
2011-06	RAN#52	R5-112855	0400	-	Uncertainties and Test Tolerances for RRM test case 5.2.10	9.4.0	9.5.0
2011-06	RAN#52	R5-112858	0401	-		9.4.0	9.5.0
2011-09	RAN#53	R5-113183	0402	-	RRM TC 8: Adding missing PRACH Configuration for some tests	9.5.0	9.6.0
2011-09	RAN#53	R5-113226	0403	 -	Uncertainties and Test Tolerances for RRM test case 4.3.1.3	9.5.0	9.6.0
2011-09	RAN#53	R5-113249	0404	<u> </u>	Uncertainties and Test Tolerances for TC 5.2.1	9.5.0	9.6.0
2011-09	RAN#53	R5-113250	0405	<u> </u>	Uncertainties and Test Tolerances for TC 5.2.2	9.5.0	9.6.0
2011-09	RAN#53	R5-113395	0405	 	Not tested minimum requirement in Clause 8	9.5.0	9.6.0
2011-09	RAN#53	R5-113460	0407	<u> </u>	Correction to 4.2.3	9.5.0	9.6.0
2011-09	RAN#53	R5-113461	0407	 	Correction to 4.2.3 Correction to the exceptional messages in HO TCs with	9.5.0	9.6.0
2011-09	RAN#53	R5-113462	0409	_	unknow n target cell	9.5.0	9.6.0
2011-09	RAN#53	R5-113462	0410	<u> </u>	Info Correction to 6.2.3 and 6.2.4	9.5.0	9.6.0
2011-09	RAN#53	R5-113466	0410	<u> </u>	Correction to 6.2.3 and 6.2.4	9.5.0	9.6.0
2011-09	RAN#53	R5-113466	0411	Ε-	Correction to FDD RSRP and RSRQ test Correction to TDD RSRP and RSRQ test for band 41	9.5.0	9.6.0
2011-09	RAN#53	R5-113467 R5-113468	0412	Ε-	Correction to TDD RSRP and RSRQ test for band 41 Correction to the exceptional messages in Annex H	9.5.0	9.6.0
				<u>-</u>			
2011-09	RAN#53	R5-113597	0414	ı	Abbreviation update and Editorial corrections in TS36.521-3	9.5.0	9.6.0

2011-09	RAN#53	R5-113843	0443		Adding FGI Applicabilities into Chapters 4 - 7 in 36.521-3	9.5.0	9.6.0
2011-09	RAN#53	R5-113844	0440		RRM TCs 5.1: PRACH pow er configuration	9.5.0	9.6.0
2011-09	RAN#53	R5-113845	0444	Ι-	RRM TCs 7.3: Update of the test procedure and requirements	9.5.0	9.6.0
2011-09	RAN#53	R5-113846	0425	Ι-	Statistical clarification for TC 8.3.3 and 8.3.4	9.5.0	9.6.0
2011-09	RAN#53	R5-114005	0425		LTE-RRM: Corrections to test iteration for test case 4.3.4.1	9.5.0	9.6.0
2011-09	RAN#53	R5-114007	0416	_	Correction on the inter-RAT cell identification time in DRX	9.5.0	9.6.0
2011-09	RAN#53	R5-114007	0417	Ε-	Completing for E-UTRAN TDD - UTRAN TDD handover test	9.5.0	9.6.0
2011 03	10-11-00	100114000	0417		case	5.5.0	5.0.0
2011-09	RAN#53	R5-114013	0418	-		9.5.0	9.6.0
2011-09	RAN#53	R5-114016	0419	-	Uncertainties and Test Tolerances for TC 9.4.1 and 9.4.2	9.5.0	9.6.0
2011-09	RAN#53	R5-114019	0420	-	CR Uncertainties and TT for 8.4.3 in 36.521-3	9.5.0	9.6.0
2011-09	RAN#53	R5-114021	0421	-	CR Uncertainties and TT for 4.3.4.3 in 36.521-3	9.5.0	9.6.0
2011-09	RAN#53	R5-114026	0422	ļ_	Deletion of editor note for discrepancy between TT and 36.903	9.5.0	9.6.0
2011-09	RAN#53	R5-114050	0423	ļ	RRM: Use of State 3A-RF	9.5.0	9.6.0
2011-09	RAN#53	R5-114055	0424	-	RRM TCs 7.2: Transition between iteration loops	9.5.0	9.6.0
2011-09	RAN#53	R5-114057	0426	<u> </u>	Statistical clarification in 6 Test cases in clause 8.11.	9.5.0	9.6.0
2011-09	RAN#53	R5-114059	0427	<u> </u>	Completing for E-UTRAN TDD-UTRAN TDD cell re-	9.5.0	9.6.0
2011-03	10414#33	10-114039	0421	_	selection_UTRA is of higher priority	3.3.0	3.0.0
2011-09	RAN#53	R5-114060	0428	-	Uncertainties and Test Tolerances for TC 8.9.1	9.5.0	9.6.0
2011-09	RAN#53	R5-114072	0429	-	Update LTE RRM test requirements for FDD LTE Band 23 in	9.5.0	9.6.0
2011-09	RAN#53	R5-114084	0430		36.521-3 Simplification of frequency dependent minimum requirements	9.5.0	9.6.0
					in TS36.521-3		
2011-09	RAN#53	R5-114097	0431		Adding FGI Applicabilities into Chapters 8 - 9 in 36.521-3	9.5.0	9.6.0
2011-09	RAN#53	R5-114099	0432	-	Addition of new RRM TC 8.1.5 ⁷ ÜE-UTRAN FDD - FDD Intra- frequency identification of a new CGI of E-UTRA cell using autonomous gaps	9.5.0	9.6.0
2011-09	RAN#53	R5-114100	0433	-	Addition of new RRM TC 8.1.6: E-UTRAN FDD - FDD Intra- frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	9.5.0	9.6.0
2011-09	RAN#53	R5-114101	0434	-	Addition of new RRM TC 8.2.3: E-UTRAN TDD - TDD Intra- frequency identification of a new CGI of E-UTRA cell using	9.5.0	9.6.0
2011-09	RAN#53	R5-114102	0435	-	autonomous gaps Addition of new RRM TC 8.2.4: E-UTRAN TDD - TDD Intra- frequency identification of a new CGI of E-UTRA cell using	9.5.0	9.6.0
					autonomous gaps with DRX		
2011-09	RAN#53	R5-114103	0436	-	Addition of new RRM TC 8.3.4' ÜE-UTRAN FDD - FDD Inter- frequency identification of a new CGI of E-UTRA cell using autonomous gaps	9.5.0	9.6.0
2011-09	RAN#53	R5-114104	0437	-	Addition of new RRM TC 8.3.5: E-UTRAN FDD - FDD Inter- frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	9.5.0	9.6.0
2011-09	RAN#53	R5-114105	0438	-	Addition of new RRM TC 8.4.4: E-UTRAN TDD - TDD Inter- frequency identification of a new CGI of E-UTRA cell using autonomous gaps	9.5.0	9.6.0
2011-09	RAN#53	R5-114106	0439	-	Addition of new RRM TC 8.4.5: E-UTRAN TDD - TDD Inter- frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX	9.5.0	9.6.0
2011-09	RAN#53	R5-114111	0441	-	Correction to RLM	9.5.0	9.6.0
2011-09	RAN#53	R5-114115	0442	-	LTE-RRM: Correction to test procedure for inter-RAT cell reselection test cases	9.5.0	9.6.0
2011-09	RAN#53	R5-114119	0445	-	Introduction of Expanded 1900MHz Band (Band 25) into section 9 of 36.521-3	9.5.0	9.6.0
2011-12	RAN#54	R5-115121	0446	-	RRM TC-s 7, 8: Iteration loop and usage of the UE states 3A / 3A-RF	9.6.0	9.7.0
2011-12	RAN#54	R5-115140	0447	-	Modify the test requirement table in the TC 5.2.1	9.6.0	9.7.0
2011-12	RAN#54	R5-115142	0449	-	LTE-RRM: Update to Annex E	9.6.0	9.7.0
2011-12	RAN#54	R5-115189	0452	 -	Uncertainties and Test Tolerances for RRM test case 8.11.3	9.6.0	9.7.0
2011-12	RAN#54	R5-115199	0453	-	Correction of references to Annex I in TS36.521-3	9.6.0	9.7.0
2011-12	RAN#54	R5-115200	0454	-	Test System uncertainties for frequencies between 3000MHz to 4200MHz in 36.521-3	9.6.0	9.7.0
2011-12	RAN#54	R5-115202	0456	-	8.7.3	9.6.0	9.7.0
2011-12	RAN#54	R5-115327	0457	Ŀ	Correction to RRM tests 7.1.2 and 7.2.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115379	0458	-	Update of operating band configuration	9.6.0	9.7.0
2011-12	RAN#54	R5-115381	0459	<u> </u>	Correction to FGI in test applicability for Cell reselection test case	9.6.0	9.7.0
2011-12	RAN#54	R5-115385	0460	-	Correction to 5.2.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115386	0461	-	Alignment of the exceptional messages in 7.3x RLM	9.6.0	9.7.0
2011-12	RAN#54	R5-115387	0462	-	Correction to 8.10.1 and 8.10.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115388	0463	-	Correction to the exceptional message in 8.6.1.1	9.6.0	9.7.0
2011-12	RAN#54	R5-115403	0465	-	Uncertainties and Test Tolerances for RRM test case 4.3.3	9.6.0	9.7.0
t		•			•	•	•

2011-12	RAN#54	R5-115433	0466	-	Corrections to TC 5.1.5 and TC 5.1.6 inter-f HO: unknow n target cell	9.6.0	9.7.0
2011-12	RAN#54	R5-115435	0467	1-	Updates of TC 5.2.3: E-UTRAN FDD - GSM handover	9.6.0	9.7.0
2011-12	RAN#54	R5-115479	0468	-	Corrections to RSRQ in Intra-Frequency Measurement Minimum Requirements	9.6.0	9.7.0
2011-12	RAN#54	R5-115482	0469	-	Addition to measurement uncertainties and test tolerances E- UTRAN FDD - UTRAN FDD event triggered reporting w/DRX under fading test in Annex	9.6.0	9.7.0
2011-12	RAN#54	R5-115787	0471	-	Uncertainties and Test Tolerances for RRM test case 8.11.1 and 8.11.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115582	0472	-	RRM TC 6.2: Corrections to power settings	9.6.0	9.7.0
2011-12	RAN#54	R5-115814	0473	-	Incomplete test case for 7.1.1 and 7.1.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115823	0474	-	Uncertainties and TT for TC 6.1.3 and 6.1.4 in 36.521-3	9.6.0	9.7.0
2011-12	RAN#54	R5-115827	0477	-	Correction to Test Tolerances for RRM ch.9 test cases	9.6.0	9.7.0
2011-12	RAN#54	R5-115833	0478	 -	Adding band 22 (3500MHz FDD) to 36.521-3	9.6.0	9.7.0
2011-12	RAN#54	R5-115834	0479	-	RRM: Phase rotation for intrafrequency tests in static conditions	9.6.0	9.7.0
2011-12	RAN#54	R5-115835	0480	Ī-	Addition of the exceptional message in 4.6.1.1	9.6.0	9.7.0
2011-12	RAN#54	R5-115836	0481	-	Addition of undefined UTRA system information for TC 4.3.1.1	9.6.0	9.7.0
2011-12	RAN#54	R5-115838	0482	-	Corrections to TC 5.2.1 and TC 5.2.2: E-UTRAN FDD/TDD - UTRAN FDD handover	9.6.0	9.7.0
2011-12	RAN#54	R5-115839	0483	-	Corrections to message content definition for TC 5.1.1 and TC 5.1.2: intra-f HO	9.6.0	9.7.0
2011-12	RAN#54	R5-115840	0484	-	Updates to TC 5.1.3 and TC 5.1.4: inter-f HO	9.6.0	9.7.0
2011-12	RAN#54	R5-115841	0485	-	Updates of TC 5.2.4 and TC 5.2.5: E-UTRAN FDD/TDD - UTRAN TDD handover	9.6.0	9.7.0
2011-12	RAN#54	R5-115842	0486	-	Removal of measurement related message definitions in TC 5.2.7, TC 5.2.9 and TC 5.2.10	9.6.0	9.7.0
2011-12	RAN#54	R5-115843	0487	-	Modification of message definitions in the Annex H	9.6.0	9.7.0
2011-12	RAN#54	R5-115844	0488	-	Modification of the test cases of Random Access	9.6.0	9.7.0
2011-12	RAN#54	R5-115845	0489	1-	RRM TC-s 9: Missing bands in specification	9.6.0	9.7.0
2011-12	RAN#54	R5-115846	0490	-	RRM TC-s 7.3: SRS configuration in radio link monitoring tests	9.6.0	9.7.0
2011-12	RAN#54	R5-115847	0491	-	Correction to test frequency in MeasConfig-DEFAULT	9.6.0	9.7.0
2011-12	RAN#54	R5-115848	0492	-	Corrections to TC 7.1.1 and TC 7.1.2: UE Transmit Timing Accuracy	9.6.0	9.7.0
2011-12	RAN#54	R5-115850	0493	-	Correction to 5.2.6	9.6.0	9.7.0
2011-12	RAN#54	R5-115878	0494	-	Correction to cell reselection delay in test procedure	9.6.0	9.7.0
2011-12	RAN#54	R5-115882	0495	-	Addition of undefined UTRA system information for TC 4.3.1.2 and TC 4.3.1.3	9.6.0	9.7.0
2011-12	RAN#54	R5-115883	0496	-	Addition of undefined UTRA system information for TC 4.3.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115884	0497	-	Addition of undefined UTRA system information for TC 4.3.3	9.6.0	9.7.0
2011-12	RAN#54	R5-115885	0498	-	Addition of undefined UTRA system information for TC 4.3.4.1	9.6.0	9.7.0
2011-12	RAN#54	R5-115886	0499	-	Addition of UTRA system information definitions for TC 4.3.4.2	9.6.0	9.7.0
2011-12	RAN#54	R5-115887	0500	-	Updates of the message content definitions for TC 4.3.4.3	9.6.0	9.7.0
2011-12	RAN#54	R5-115888	0501	-	Updates of TC 4.4.1 and TC 4.4.2: E-UTRAN FDD/TDD - GSM cell re-selection	9.6.0	9.7.0
2011-12	RAN#54	R5-115786	0502	-	Corrections to test cases for E-UTRAN RRC Re-establishment	9.6.0	9.7.0
2011-12	RAN#54	R5-115893	0503	-	RRM TC-s 4: General review of the test procedures of cell re- selection test cases	9.6.0	9.7.0
2011-12	RAN#54	R5-115481	0504	-	Uncertainties and test tolerances E-UTRAN FDD - UTRAN FDD event triggered reporting w/DRX under fading test	9.6.0	9.7.0
2012-03	RAN#55	R5-120107	0505	-	Uncertainties and Test Tolerance for E-UTRAN TDD Intra- frequency new CGI test cases 8.2.3 and 8.2.4	9.7.0	9.8.0
2012-03	RAN#55	R5-120124	0506	-	Uncertainties and Test Tolerance for E-UTRAN TDD Inter- frequency new CGI test cases 8.4.4 and 8.4.5.	9.7.0	9.8.0
2012-03	RAN#55	R5-120141	0507	1-	RRM: Iteration loop in cdma2000 reselection tests	9.7.0	9.8.0
2012-03	RAN#55	R5-120178	0508	-	RF/RRM: Correction on TC 8.4.1 message content definition	9.7.0	9.8.0
2012-03	RAN#55	R5-120183	0509	-	RF/RRM: Addition of new TC 4.2.4 E-UTRAN FDD - TDD cell re-selection inter frequency case	9.7.0	9.8.0
2012-03	RAN#55	R5-120184	0510	-	RF/RRM: Addition of new TC 4.2.5 E-UTRAN TDD - FDD cell re-selection inter frequency case	9.7.0	9.8.0
2012-03	RAN#55	R5-120185	0511	-	RF/RRM: Addition of new TC 5.1.7 E-UTRAN FDD - TDD handover inter frequency case	9.7.0	9.8.0
2012-03	RAN#55	R5-120186	0512	-	RF/RRM: Addition of new TC 5.1.8 E-UTRAN TDD - FDD handover Inter frequency case	9.7.0	9.8.0
2012-03	RAN#55	R5-120187	0513	-	RF/RRM: Addition of new TC 8.12.1 E-UTRANTDD - FDD Inter-frequency event triggered reporting under fading	9.7.0	9.8.0
2012-03	RAN#55	R5-120189	0514	-	propagation conditions in asynchronous cells RF/RRM: Addition of new TC 9.1.5.1 FDD - TDD Inter	9.7.0	9.8.0
2042.00	DANWEE	DE 400400	0545	<u> </u>	Frequency Absolute RSRP Accuracy RF/RRM: Addition of new TC 9.1.5.2 FDD - TDD Inter	0.7.0	0.0.0
2012-03	RAN#55	R5-120190	0515		Frequency Relative Accuracy of RSRP	9.7.0	9.8.0

2012-03	RAN#55	R5-120191	0516	-	RF/RRM: Addition of Cell configuration mapping for those new RRM test cases	9.7.0	9.8.0
2012-03	RAN#55	R5-120245	0517	-	Update of 36.521-3 Test Cases 9.1.4.1 and 9.1.4.2, lo difference band-independent	9.7.0	9.8.0
2012-03	RAN#55	R5-120249	0518	-	Uncertainties and Test Tolerances for RRM test case 8.11.4	9.7.0	9.8.0
2012-03	RAN#55	R5-120321	0519	-	Update of 4.3.1 E-UTRAN FDD - UTRAN FDD cell re-selection	9.7.0	9.8.0
2012-03	RAN#55	R5-120322	0520	-	Update of 4.3.4 E-UTRAN TDD - UTRAN TDD cell re-selection	9.7.0	9.8.0
2012-03	RAN#55	R5-120323	0521	-	Adding E-UTRAN test parameter reference to messages exception	9.7.0	9.8.0
2012-03	RAN#55	R5-120324	0522	1-	Correction to 4.6.1.1 E-UTRAN FDD c2k cell re-selection	9.7.0	9.8.0
2012-03	RAN#55	R5-120325	0523	-	Correction to 5.2.4 E-UTRAN TDD - UTRAN TDD handover	9.7.0	9.8.0
2012-03	RAN#55	R5-120339	0524	-	Addition of FGI bit 16 into test cases 9.1.x.x and 9.2.x.x	9.7.0	9.8.0
2012-03	RAN#55	R5-120341	0525	-	Correction to FGI bits in test case 8.5.2	9.7.0	9.8.0
2012-03	RAN#55	R5-120424	0526	-	Correction to Tintra in Minimum Conformance Requirements	9.7.0	9.8.0
2012-03	RAN#55	R5-120425	0527	-	Correction to the identification time in DRX for UTRA TDD	9.7.0	9.8.0
2012-03	RAN#55	R5-120515	0528	-	Addition of FGI bit 15 into test cases configuring event 1B	9.7.0	9.8.0
2012-03	RAN#55	R5-120808	0535	-	RF/RRM: Corrections on RSRP and RSRQ accuracy related	9.7.0	9.8.0
2012-03	RAN#55	R5-120809	0536		test cases TS 36.521-3: 8.3.3 and 8.4.3 T2 value correction	0.7.0	9.8.0
2012-03	RAN#55		0537	-		9.7.0	
		R5-120810		_	TS 36.521-3: 6.2.3 Extreme conditions test tolerance correction	9.7.0	9.8.0
2012-03	RAN#55	R5-120827	0538		Correction to CQI report configuration of 7.1.1 in TS36.521-3	9.7.0	9.8.0
2012-03	RAN#55	R5-120846	0539	<u> -</u>	Test configuration for Inter RAT testcases, delete note	9.7.0	9.8.0
2012-03	RAN#55	R5-120847	0540	-	RF/RRM: Addition of new TC 8.13.1 E-UTRAN FDD - TDD Inter-frequency event triggered reporting under fading propagation conditions in asynchronous cells	9.7.0	9.8.0
2012-03	RAN#55	R5-120848	0541	1_	Correction to 8.7.3 E-UTRAN TDD - UTRAN TDD SON ANR	9.7.0	9.8.0
2012-03	RAN#55	R5-120892	0542	 	Update of PRACH test case	9.7.0	9.8.0
2012-03	RAN#55	R5-120894	0543	1_	Correction to 5.2.10 E-UTRAN TDD - UTRAN TDD handover	9.7.0	9.8.0
2012-03	RAN#55	R5-120895	0544	1_	Correction to test frequency in MeasConfig-DEFAULT for E-	9.7.0	9.8.0
2012-03	RAN#55	R5-120907	0547		UTRAN to GSM cell search test case Uncertainties and Test Tolerances for E-UTRAN to HRPD Cell	9.7.0	9.8.0
2012-03	RAN#55	R5-120907	0546		reselection TC 4.5.1.1 Uncertainties and Test Tolerances for E-UTRAN to HRPD HO	9.7.0	9.8.0
				_	TC 5.3.1		
2012-03	RAN#55 RAN#55	R5-120530 R5-120531	0529 0530	-	Introduction to FDD RSRQ for E-UTRA Carrier Aggregation Introduction to TDD RSRQ for E-UTRA Carrier Aggregation	9.8.0	10.0.0
2012-03	RAN#55	R5-120531	0530	-	Introduction to FDD RSRQ for E-UTRA Carrier Aggregation in Annex	9.8.0	10.0.0
2012-03	RAN#55	R5-120533	0532	-	Introduction to TDD RSRQ for E-UTRA Carrier Aggregation in Annex	9.8.0	10.0.0
2012-03	RAN#55	R5-120535	0533	-	Introduction to Carrier Aggregation in Radio Resource Management	9.8.0	10.0.0
2012-03	RAN#55	R5-120536	0534	-	Introduction to Carrier Aggregation in Default Message Contents	9.8.0	10.0.0
2012-06	RAN#56	R5-121229	0549	-		10.0.0	10.1.0
2012-06	RAN#56	R5-121240	0550	 -	Revise test frequencies for FDD-TDD interw orking Test cases	10.0.0	10.1.0
2012-06	RAN#56	R5-121247	0551	-	RRM: Removal of Editors note on connection diagram used in intra frequency tests in static conditions		10.1.0
2012-06	RAN#56	R5-121527	0552	-	Addition of Handover to UTRAN commands in 36.521-3	10.0.0	10.1.0
2012-06	RAN#56	R5-121528	0553	-	Correction of drx-RetransmissionTimer parameters		10.1.0
2012-06	RAN#56	R5-121529	0554	-	Correction to Test2 in 7.1.1 and 7.1.2 of 36.521-3	10.0.0	10.1.0
2012-06	RAN#56	R5-121530	0555	-	Correction to DRX offset in 7.1.2		10.1.0
2012-06	RAN#56	R5-121532	0557	-	Correction to 8.11.1 and 8.11.2	10.0.0	10.1.0
2012-06	RAN#56	R5-121547	0558	-	Addition of new TCs for UTRAN TDD P-CCPCH RSCP measurement	10.0.0	10.1.0
2012-06	RAN#56	R5-121691	0559	-	TS 36.521-3: 8.3.3 and 8.4.3 update	10.0.0	10.1.0
2012-06	RAN#56	R5-121901	0560	-	Introduction of E-UTRAN Inter Introduction of E-UTRAN Inter frequency case reselection in the existence of non-allowed CSG cell		10.1.0
2012-06	RAN#56	R5-121902	0561	-	Addition of new RRM TC 6.3.1: Redirection from E-UTRAN FDD to UTRAN FDD	10.0.0	10.1.0
2012-06	RAN#56	R5-121922	0562	-	Addition of new RRM TC 6.3.2: Redirection from E-UTRAN TDD to UTRAN FDD	10.0.0	10.1.0
2012-06	RAN#56	R5-121923	0563	-	Addition of new RRM TC 6.3.3: Redirection from E-UTRAN FDD to GERANw hen System Information is provided	10.0.0	10.1.0
2012-06	RAN#56	R5-121924	0564	-	Addition of new RRM TC 6.3.4: Redirection from E-UTRAN TDD to GERANw hen System Information is provided	10.0.0	10.1.0
2012-06	RAN#56	R5-121927	0565	 	Uncertainties and Test Tolerances for TC 9.6.2	10.0.0	10.1.0
2012-06	RAN#56	R5-121929	0566	-	Uncertainties and Test Tolerances for RRM test cases 4.2.4		10.1.0
00		1 1 1 1 1 1 1 1			and 4.2.5		2

2012-06 RANW56 R5-121931 0.568 	10.1.0
2012-06 RANW56 R5-121932 0569 hotertainties and Test Tolerances for RRM test cases 8.14.1 10.00 2012-06 RANW56 R5-121932 0569 hotertainties and Test Tolerances for RRM test cases 9.1.5.1 10.00 2012-06 RANW56 R5-121934 0571 hotertainties and Test Tolerances for RRM test case 9.1.5.1 10.00 2012-06 RANW56 R5-121940 0572 hotertainties and Test Tolerances for RDO -TDD Inter 1 2012-06 RANW56 R5-121940 0572 hotertainties and Test Tolerances for FDO -TDD Inter 1 2012-06 RANW56 R5-121941 0573 hotertainties and Test Tolerances for FDO -TDD Inter 1 2012-06 RANW56 R5-121940 0572 Correction to the test mode references for RRM test 1 2012-06 RANW56 R5-121942 0574 RRM Introduction of Amex for handling of different releases 1 2012-06 RANW56 R5-121942 0574 RRM Introduction of Amex for handling of different releases 1 2012-06 RANW56 R5-121980 0575 Addition of Amex for handling of different releases 1 2012-06 RANW56 R5-121980 0576 Change in transmit liming tests based on DRX feature group 1 2012-06 RANW56 R5-121980 0576 Change in transmit liming tests based on DRX feature group 1 2012-06 RANW56 R5-121991 0579 Clarifications to FDD RSRQ for E-UTRA Carrier Aggregation 1 2012-06 RANW56 R5-121990 0581 Addition of new RRM TG 3.8 : E-UTRA FDD RRC connection 1 2012-06 RANW56 R5-121990 0580 Addition of new RRM TG 3.8 : E-UTRA FDD LTRA RDD LTRA	10.10
2012-06 RANW56 R5-121933 0570 Uncertainties and Test Tolerances for RRM test case 9.15.1 10.00	110.1.0
2012-06 RANW56 RS-121934 0570 Lincertainties and Test Tolerances for RPM test case 9.1.5.1 10.00 2012-06 RANW56 RS-121940 0572 Lincertainties and Test Tolerances for RPM case 9.1.5.2 10.00 2012-06 RANW56 RS-121940 0572 Correction to the test mode of references for RPM tests as 9.1.5.2 10.00 2012-06 RANW56 RS-121941 0573 Addition of new RRM To 6.3.5 E-UTRA TDD RRC connection 10.00 2012-06 RANW56 RS-121969 0574 RRM titroduction of Annex for handling of different releases 10.00 2012-06 RANW56 RS-121969 0575 Addition of new RRM To 6.3.5 E-UTRA TDD RRC connection 10.00 2012-06 RANW56 RS-121980 0577 Change in transmit timing tests based on DRX feature group 10.00 2012-06 RANW56 RS-121980 0577 Charifications to TDD RSRQ for E-UTRA Carrier Aggregation 10.00 2012-06 RANW56 RS-121989 0580 Addition of new RRM TC 6.3.6 E-UTRA TDD LTRA TDD Tolentain tests Tolerance analysis for operating band 25 and 41 10.00 2012-06 RANW56 RS-122999<	10.1.0
2012-06 RANW56 R5-121934 0571 - Uncertainties and Test Tolerances for FDD. TDD Inter Frequency Palative Accuracy of RSRP sets case 9.1.5.2 20.0.0 2012-06 RANW56 R5-121941 0573 - Addition of new RRM TG 6.3.5 E-UTRA TDD RC connection 10.0.0 2012-06 RANW56 R5-121942 0574 - Addition of new RRM TG 6.3.5 E-UTRA TDD RC connection 10.0.0 2012-06 RANW56 R5-121942 0574 -	10.1.0
Description Prequency Relative Accuracy of RSRP test case 9.1.5.2	
2012-06 RAN#56 R5-121941 0573 - Addition of new RRM TC 6.3.5: E-UTRA TDD RRC connection 10.0.0	
1012-06 RAN#56 R5-121942 0574 RRM Introduction of Annex for handling of different releases 10.0.0	
2012-06 RAN#56 R5-121942 0574 - RRNM Introduction of Annex for handling of different releases 10.0.0 and UE capabilities 10.0.0 and UE ca	10.1.0
2012-06 RAN#56 R5-121969 0.575 - Adding operating band 26 to TS 36.521-3 10.00 2012-06 RAN#56 R5-121977 0.576 - Change in transmit timing tests based on DRX feature group 10.00 2012-06 RAN#56 R5-121980 0.577 - Clarifications to TDD RSRQ for E-UTRA Carrier Aggregation 10.00 2012-06 RAN#56 R5-121991 0.579 Further Test Tolerance analysis for operating band 25 and 41 10.00 2012-06 RAN#56 R5-121998 0.580 - Addition of new RRM TC 6.3.6: E-UTRA FDD RRC connection 10.00 2012-06 RAN#56 R5-121999 0.581 - Addition of new RRM TC 6.3.6: E-UTRA FDD RRC connection 10.00 2012-06 RAN#56 R5-121999 0.581 - Addition of new RRM TC 8.3.4: E-UTRA TDD UTRA TDD 10.00 2012-06 RAN#56 R5-122000 0.582 - Addition of new RRM TC 8.7.4: E-UTRA TDD UTRA TDD 10.00 2012-06 RAN#56 R5-122001 0.583 - Addition of new RRM TC 8.7.4: E-UTRA TDD UTRA TDD 10.00 2012-06 RAN#56 R5-122002 0.584 RRM Cl	
2012-06 RAN#56 R5-121969 0575 Adding operating band 26 to TS 36.521-3 10.0.0	10.1.0
2012-06 RAN#56 R5-121977 0576 Change in transmit timing tests based on DRX feature group 10.0.0 indicator 2012-06 RAN#56 R5-121981 0578 Clarifications to FDD RSRQ for E-UTRA Carrier Aggregation 10.0.0 2012-06 RAN#56 R5-121991 0579 Further Test Tolerance analysis for operating band 25 and 41 10.0.0 2012-06 RAN#56 R5-121999 0580 Addition of new RRM TC 6.3.6: E-UTRA FDD RRC connection 10.0.0 2012-06 RAN#56 R5-121999 0581 Addition of new RRM TC 8.5.4 E-UTRAN FDD - UTRAN FDD 10.0.0 2012-06 RAN#56 R5-121999 0581 Addition of new RRM TC 8.5.4 E-UTRAN FDD - UTRAN FDD 10.0.0 2012-06 RAN#56 R5-122000 0582 Addition of new RRM TC 8.5.4 E-UTRAN FDD - UTRAN FDD 10.0.0 2012-06 RAN#56 R5-122001 0583 Addition of new RRM TC 8.7.4 E-UTRAN FDD - UTRAN FDD 2012-06 RAN#56 R5-122001 0583 Addition of new RRM TC 8.7.4 E-UTRAN FDD - UTRAN FDD 2012-06 RAN#56 R5-122001 0583 Addition of new RRM TC 8.7.4 E-UTRAN FDD - UTRAN FDD 2012-06 RAN#56 R5-122002 0584 RRM Clarification under AWGN propagation 2012-06 RAN#56 R5-122002 0584 RRM Clarification under AWGN propagation 2012-08 RAN#56 R5-123005 0586 Correction to References in Annex 2012-09 RAN#57 R5-123151 0586 Correction to References in Annex 2012-09 RAN#57 R5-123151 0588 Correction to References in Annex 2012-09 RAN#57 R5-123152 0589 Correction to References in Annex 2012-09 RAN#57 R5-123163 0590 Corrections to E-UTRAN FDD inter frequency measurements 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 2012-09 RAN#57 R5-123163 0594 Corrections to E-UTRAN TDD inter frequency	10.1.0
Indicator Indicator Indicator	
2012-06 RAN#56 R5-121991 0579 Further Test Tolerance analysis for operating band 25 and 41 10.0.0	10.1.0
2012-06 RAN#56 R5-121991 0579 Further Test Tolerance analysis for operating band 25 and 41 10.0.0	10.1.0
2012-06 RAN#56 R5-121991 0579 Further Test Tolerance analysis for operating band 25 and 41 10.0.0 in 36.521-3 2012-06 RAN#56 R5-121999 0580 Addition of new RRM TC 6.3.6: E-UTRA FDD RRC connection 10.0.0 2012-06 RAN#56 R5-121999 0581 Addition of new RRM TC 6.3.6: E-UTRAN FDD - UTRAN FDD enhanced cell identification under AWGN propagation 10.0.0 2012-06 RAN#56 R5-122000 0582 Addition of new RRM TC 8.3.4 E-UTRAN FDD - UTRAN FDD enhanced cell identification under AWGN propagation 2012-06 RAN#56 R5-122001 0583 Addition of new RRM TC 8.7.4 E-UTRA TDD 10.0.0 enhanced cell identification under AWGN propagation 2012-06 RAN#56 R5-122001 0583 Addition of new RRM TC 8.9.2 E-UTRA FDD-UTRA TDD 10.0.0 enhanced cell identification under AWGN propagation 2012-06 RAN#56 R5-122002 0584 RRM Clarifications to the OCNG patterns 10.0.0 2012-09 RAN#57 R5-122036 0585 Correction to SR Config Index for TDD DRX test cases 10.0.0 2012-09 RAN#57 R5-123149 0587 Corrections to E-UTRAN FDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123151 0588 Corrections to E-UTRAN FDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123153 0590 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123166 0592 Correction to TDD RSRQ for E-UTRA Carrier	10.1.0
In 36.521-3	10.1.0
release redirection to UTRA TDD	
2012-06 RAN#56 R5-121999 0581 Addition of new RRM TC 8.5.4 E-UTRAN FDD - UTRAN FDD 10.0.0 enhanced cell identification under AWGN propagation conditions Addition of new RRM TC 8.7.4 E-UTRA TDD-UTRA TDD 10.0.0 enhanced cell identification under AWGN propagation 10.0.0 enhanced cell identification 10.0.0 enhance	10.1.0
enhanced cell identification under AWGN propagation conditions	10.1.0
2012-06 RAN#56 R5-122000 0582 - Addition of new RRM TC 8.7.4 E-UTRA TDD_UTRA TDD enhanced cell identification under AWGN propagation conditions	10.1.0
enhanced cell identification under AWGN propagation conditions	1
Conditions Con	10.1.0
2012-06 RAN#56 R5-122001 0583 - Addition of new RRM TC 8.9.2 E-UTRA FDD-UTRA TDD enhanced cell identification under AWGN propagation conditions 10.0.0 2012-06 RAN#56 R5-122002 0584 - RRM: Clarifications to the OCNG patterns 10.0.0 2012-09 RAN#57 R5-122065 0585 - Correction to SR Config index for TDD DRX test cases 10.0.0 2012-09 RAN#57 R5-123149 0587 - Correction to References in Annex 10.1.0 2012-09 RAN#57 R5-123151 0588 - Corrections to E-UTRAN FDD intra frequency measurements requirements 2012-09 RAN#57 R5-123152 0589 - Corrections to E-UTRAN TDD intra frequency measurements requirements 2012-09 RAN#57 R5-123153 0590 - Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 - Introduction of E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123166 0592 - Corrections to E-UTRAN TDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123166 0592 - Corrections to E-UTRAN TDD-TDD Event Triggered reporting 0 n deactivated SCell with PCell interruption in non-DRX for CA 2012-09 RAN#57 R5-123166 0592 - Correction to FDD RSRQ for E-UTRA Carrier Aggregation 10.1.0 2012-09 RAN#57 R5-123167 0593 - Correction to TDD RSRQ for E-UTRA Carrier Aggregation 10.1.0 2012-09 RAN#57 R5-123281 0596 - Addition of new TC 4.6.2.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123291 0598 - Addition of new TC 8.19.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123291 0598 - Addition of new TC 8.19.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123291 0599 - Annex H message content updates 10.1.0 2012-09 RAN#57 R5-123326 0600 - Addition of new TC 8.19.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123336 0600 - Addition of new RTB. 15.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123336 0600 - Addition of new RTB. 15.1 E-UTRAN TDD-CDMA2000 1X 2012-09 RAN#57 R5-123336 0600 - Addit	
enhanced cell identification under AWGN propagation conditions	<u> </u>
Conditions Conditions	10.1.0
2012-06 RAN#56 R5-122002 0584 - RRMt Clarifications to the OCNG patterns 10.0.0 2012-07 RAN#56 R5-122007 0556 - Correction to SR Config Index for TDD DRX test cases 10.0.0 2012-09 RAN#57 R5-123056 0585 - Correction to SR Config Index for TDD DRX test cases 10.0.0 2012-09 RAN#57 R5-123149 0587 - Corrections to E-UTRAN FDD intra frequency measurements 10.1.0 2012-09 RAN#57 R5-123151 0588 - Corrections to E-UTRAN FDD intra frequency measurements 10.1.0 2012-09 RAN#57 R5-123152 0589 - Corrections to E-UTRAN FDD intra frequency measurements 10.1.0 2012-09 RAN#57 R5-123153 0590 - Corrections to E-UTRAN FDD intra frequency measurements 10.1.0 2012-09 RAN#57 R5-123163 0591 - Introduction of E-UTRAN FDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123166 0592 - Corrections to E-UTRAN FDD inter frequency measurements 10.1.0 2012-09 RAN#57 R5-123167 0593 - Correction to FDD RSRQ for E-UTRA Carrier Aggregation 10.1.0 2012-09 RAN#57 R5-123168 0594 - Introduction of default RRC messages exceptions for Carrier Aggregation 2012-09 RAN#57 R5-123281 0596 - Addition of new TC4.6.2.1 E-UTRAN TDD-cdma2000 1X cell 10.1.0 2012-09 RAN#57 R5-123291 0598 - Addition of new TC4.6.2.1 E-UTRAN TDD-DEWNA (2001 X) 2012-09 RAN#57 R5-123291 0598 - Addition of new TC4.6.2.1 E-UTRAN TDD-DEWNA (2001 X) 2012-09 RAN#57 R5-123335 0601 - Addition of transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123335 0601 - Correction to transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of new RRM TC4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of new RRM TC4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of new RRM TC4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 2012-09 RAN#57 R5-123336 0603 RRM Update of Annex J	
2012-06 RAN#56 R5-122007 0556 Correction to SR Config Index for TDD DRX test cases 10.0.0	40.4.6
2012-09 RAN#57 R5-123149 0585 - Correction to References in Annex I 10.1.0	
2012-09 RAN#57 R5-123151 0588 - Corrections to E-UTRAN FDD intra frequency measurements requirements 10.1.0	
requirements	
2012-09 RAN#57 R5-123151 0588 Corrections to E-UTRAN FDD inter frequency measurements requirements 10.1.0	10.2.0
requirements	
2012-09 RAN#57 R5-123152 0589 - Corrections to E-UTRAN TDD intra frequency measurements 10.1.0	10.2.0
requirements requirements	
2012-09 RAN#57 R5-123163 0590 -	10.2.0
requirements requirements requirements	
2012-09 RAN#57 R5-123163 0591 - Introduction of E-UTRAN TDD-TDD Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX for CA	10.2.0
On deactivated SCell with PCell interruption in non-DRX for CA	
2012-09 RAN#57 R5-123166 0592 - Correction to FDD RSRQ for E-UTRA Carrier Aggregation tests 10.1.0	10.2.0
Lests 2012-09 RAN#57 R5-123167 0593 - Correction to TDD RSRQ for E-UTRA Carrier Aggregation 10.1.0	
2012-09	10.2.0
Lests 2012-09 RAN#57 R5-123168 0594 - Introduction of default RRC messages exceptions for Carrier Aggregation Addition of new TC 4.6.2.1 E-UTRAN TDD-cdma2000 1X Cell 10.1.0 Reselection: cdma2000 1X is of Lower Priority 2012-09 RAN#57 R5-123290 0597 - Addition of new TC 8.18.1 E-UTRAN TDD-HRPD event triggered reporting under fading propagation conditions 2012-09 RAN#57 R5-123291 0598 - Addition of new TC 8.19.1 E-UTRAN TDD-CDMA2000 1X event triggered reporting under fading propagation conditions 2012-09 RAN#57 R5-123292 0599 - Annex H message content updates 10.1.0 2012-09 RAN#57 R5-123301 0600 - Addition of Cell configuration mapping for new RRM test cases 10.1.0 2012-09 RAN#57 R5-123335 0601 - Correction to transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of band indicator for GERAN 10.1.0 2012-09 RAN#57 R5-123426 0603 - RRM: Update of Annex J 10.1.0 Reselection: HRPD is of Lower Priority	
2012-09	10.2.0
Aggregation Addition of new TC 4.6.2.1 E-UTRAN TDD-cdma2000 1X Cell 10.1.0	
2012-09	10.2.0
Reselection: cdma2000 1X is of Lower Priority	<u> </u>
2012-09	10.2.0
triggered reporting under fading propagation conditions	1
2012-09	10.2.0
event triggered reporting under fading propagation conditions	400
2012-09 RAN#57 R5-123292 0599 - Annex H message content updates 10.1.0 2012-09 RAN#57 R5-123301 0600 - Addition of Cell configuration mapping for new RRM test cases 10.1.0 2012-09 RAN#57 R5-123335 0601 - Correction to transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of band indicator for GERAN 10.1.0 2012-09 RAN#57 R5-123426 0603 - RRM: Update of Annex J 10.1.0 2012-09 RAN#57 R5-123903 0606 - Addition of new RRM TC 4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 Reselection: HRPD is of Lower Priority Reselection: HRPD is of Lower Priority 10.1.0	10.2.0
2012-09 RAN#57 R5-123301 0600 - Addition of Cell configuration mapping for new RRM test cases 10.1.0 2012-09 RAN#57 R5-123335 0601 - Correction to transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of band indicator for GERAN 10.1.0 2012-09 RAN#57 R5-123426 0603 - RRM: Update of Annex J 10.1.0 2012-09 RAN#57 R5-123903 0606 - Addition of new RRM TC 4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 Reselection: HRPD is of Lower Priority Reselection: HRPD is of Lower Priority 10.1.0	40.00
2012-09 RAN#57 R5-123335 0601 - Correction to transmit timing test cases 10.1.0 2012-09 RAN#57 R5-123336 0602 - Addition of band indicator for GERAN 10.1.0 2012-09 RAN#57 R5-123426 0603 - RRM: Update of Annex J 10.1.0 2012-09 RAN#57 R5-123903 0606 - Addition of new RRM TC 4.5.2.1 E-UTRAN TDD-HRPD Cell Reselection: HRPD is of Lower Priority 10.1.0	
2012-09	
2012-09 RAN#57 R5-123426 0603 - RRM: Update of Annex J 10.1.0 2012-09 RAN#57 R5-123903 0606 - Addition of new RRM TC 4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 Reselection: HRPD is of Lower Priority	10.2.0
2012-09 RAN#57 R5-123903 0606 - Addition of new RRM TC 4.5.2.1 E-UTRAN TDD-HRPD Cell 10.1.0 Reselection: HRPD is of Lower Priority	10.2.0
Reselection: HRPD is of Lower Priority	10.2.0
	10.2.0
TOURS OF THE APPOINT THE APPOINT THEORY I INVIDENTAL ASSOCIATION OF THE PROPERTY OF THE APPOINT THE AP	100
	10.2.0
2012-09 RAN#57 R5-123905 0608 - Addition of new TC 6.3.8 E-UTRA FDD RRC connection release redirection to UTRA TDDw ithout SI provided	10.2.0
2012-09 RAN#57 R5-123906 0609 - Addition of new TC 6.3.9 Redirection from E-UTRAN FDD to 10.1.0	10.2.0
UTRAN FDDw ithout System Information	
2012-09 RAN#57 R5-123907 0610 - Addition of new TC 6.3.10 Redirection from E-UTRAN FDD to 10.1.0	10.2.0
GERAN w hen System Information is not provided	
2012-09 RAN#57 R5-123908 0611 - Addition of new TC 6.3.11 Redirection from E-UTRAN TDD to 10.1.0	10.2.0
GERAN w hen System Information is not provided	
	10.2.0
measurement test cases for carrier aggregation (TC 9.1.6.1	
and 9.1.6.2)	

2012-09	RAN#57	R5-123920	0613	-	Uncertainties and Test Tolerances for E-UTRAN FDD, TDD Inter frequency reselection in the existence of non-allowed	10.1.0	10.2.0
2012-09	RAN#57	R5-123935	0614	-	CSG cell Test cases 4.2.7 and 4.2.8 Addition of new TC 5.3.6 E-UTRAN TDD-cdma2000 1X Handover	10.1.0	10.2.0
2012-09	RAN#57	R5-123936	0615	-	Addition of new TC 6.3.7 E-UTRA TDD RRC connection	10.1.0	10.2.0
2012-09	RAN#57	R5-123937	0616	-	release redirection to UTRA TDD without SI provided Addition of new TC 6.3.12 E-UTRAN TDD RRC connection	10.1.0	10.2.0
2012-09	RAN#57	R5-123938	0617	-	release redirection to UTRAN FDD without SI provided Addition of new TC 9.2.4A.1 FDD - TDD Inter Frequency	10.1.0	10.2.0
2012-09	RAN#57	R5-123939	0618	-	Absolute RSRQ Accuracy Addition of new TC 9.2.4A.2 FDD - TDD Inter Frequency	10.1.0	10.2.0
2012-09	RAN#57	R5-123940	0619	-	Relative Accuracy of RSRQ Addition of new TC 8.14.3 E-UTRAN TDD - FDD Inter-	10.1.0	10.2.0
0040.00	DANUEZ	DE 400044	0000		frequency identification of a new CGI of E-UTRA cell using autonomous gaps	40.4.0	40.00
2012-09	RAN#57	R5-123941	0620	-	Addition of new TC 8.15.3 E-UTRAN FDD - TDD Inter- frequency identification of a new CGI of E-UTRA cell using autonomous gaps	10.1.0	10.2.0
2012-09	RAN#57	R5-123959	0621	-	Introduction of E-UTRAN FDD-FDD Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX for CA	10.1.0	10.2.0
2012-09	RAN#57	R5-123960	0622	-	Introduction of E-UTRAN Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX for CA in Annex	10.1.0	10.2.0
2012-09	RAN#57	R5-123995	0623	-	Addition of new TC 8.14.2 E-UTRAN TDD-FDD Inter- frequency event triggered reporting when DRX is used under fading propagation conditions in synchronous cells	10.1.0	10.2.0
2012-09	RAN#57	R5-123996	0624	-	Addition of new TC 8.15.2 E-UTRAN FDD-TDD Inter- frequency event triggered reporting when DRX is used under	10.1.0	10.2.0
2012-09	RAN#57	R5-123998	0625		fading propagation conditions in asynchronous cells RRM: Further avoidance of frequency overlapping for inter-	10 1 0	10.2.0
2012-09	RAN#57	R5-123999	0626		frequency and inter-RAT Adding clauses in TS36.521-3 with references for positioning		10.2.0
					test cases		
2012-09	RAN#57	R5-123789	0605	-	Implementation of only partly implemented CR: Clarification of the release of UTRAN-EUTRAN Inter-RAT RRM test cases in 36.521-3	10.2.0	10.2.1
2012-12	RAN#58	R5-124155	0667	-	New TC(8.20) introduction of inter-frequency/RAT measurements in CA mode	10.3.0	10.4.0
2012-12	RAN#58	R5-124172	0668	-	Correction to TC 8.16.3 E-UTRAN FDD-FDD Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX for CA	10.3.0	10.4.0
2012-12	RAN#58	R5-124173	0669	-		10.3.0	10.4.0
2012-12	RAN#58	R5-124174	0670	-	Introduction of default RRC messages exceptions for Carrier Aggregation	10.3.0	10.4.0
2012-12	RAN#58	R5-124180	0671	-	Addition of new cell configuration mapping for CA related test cases	10.3.0	10.4.0
2012-12	RAN#58	R5-125209	0627	-	RRM TC 9.1.6.1: General updates and corrections		10.4.0
2012-12	RA N#58 RA N#58	R5-125210 R5-125328	0628 0629	-	RRM TC 9.1.6.2: General updates and corrections RRM Annex C: Addition of physical channel settings for elCIC		10.4.0
2012-12			0029	-	tests	10.3.0	10.4.0
2012-12	RAN#58	R5-125335	0630	-	RRM Annex A: Addition of measurement channels for elCIC tests		10.4.0
2012-12	RAN#58	R5-125337	0631	-	RRM New TC 7.3.9: Test skeleton for E-UTRAN FDD Radio Link Monitoring Out-of-sync with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125338	0632	-	RRM New TC 7.3.10: Test skeleton for E-UTRAN TDD Radio Link Monitoring Out-of-sync with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125339	0633	-	RRM New TC 7.3.11: Test skeleton for E-UTRAN FDD Radio Link Monitoring In-sync with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125340	0634	-	RRM New TC 7.3.12: Test skeleton for E-UTRAN TDD Radio Link Monitoring In-sync with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125341	0635	-	RRM New TC 8.1.7: Test skeleton for E-UTRAN FDD-FDD Intra-Frequency Event-Triggered Reporting with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125342	0636	-	RRM New TC 8.2.5: Test skeleton for E-UTRAN TDD-TDD Intra-Frequency Event-Triggered Reporting with non-MBSFN ABS	10.3.0	10.4.0
2012-12	RAN#58	R5-125344	0637	 	RRM TC 9.6.2: General corrections	10.3.0	10.4.0
2012-12	RAN#58	R5-125363	0638	[-	Update Test cases 5.2.3+5.2.6 uncertainties for >3GHz	10.3.0	10.4.0
2012-12	RAN#58	R5-125364	0639	-	Fading margin for RRM Test cases 8.3.1, 8.3.2, 8.4.1, 8.4.2, 8.14.1 and 8.15.1		10.4.0
2012-12	RAN#58	R5-125366	0640	-	Procedure and requirements for Test cases 4.2.7 and 4.28	10.3.0	10.4.0

2012-12	RAN#58	R5-125368	0641	-	Correction of RSRP values in the Test Requirement for RRM Test case 5.3.1	10.3.0	10.4.0
2012-12	RAN#58	R5-125382	0642	-	Clean up of TDD related RRM tests in 36.521-3	10.3.0	10.4.0
2012-12	RAN#58	R5-125427	0643	-	Correction to TC 9.2.5.1 FDD Absolute RSRQ for E-UTRA Carrier Aggregation tests	10.3.0	
2012-12	RAN#58	R5-125430	0644	-	Correction to TC 9.2.6.1 TDD Absolute RSRQ for E-UTRA Carrier Aggregation tests	10.3.0	10.4.0
2012-12	RAN#58	R5-125538	0645	-	RRM TC 9.6.1: Introduction of GSM RSSI accuracy for E- UTRAN FDD	10.3.0	
2012-12	RAN#58	R5-125549	0646	-	Uncertainties and Test Tolerances for TC 4.5.2.1	10.3.0	10.4.0
2012-12	RAN#58	R5-125551	0647	-	Uncertainties and Test Tolerances for TC 5.3.5	10.3.0	
2012-12	RAN#58	R5-125553	0648	-	Uncertainties and Test Tolerances for TC 8.14.2	10.3.0	
2012-12	RAN#58	R5-125555	0649	-	Uncertainties and Test Tolerances for TC 8.15.2	10.3.0	
2012-12	RAN#58	R5-125557	0650	-	Uncertainties and Test Tolerances for TC 8.14.3 and 8.15.3	10.3.0	
2012-12	RAN#58	R5-125559	0651	-	Uncertainties and Test Tolerances for TC 9.2.4A.1	10.3.0	
2012-12	RAN#58	R5-125561	0652	-	Uncertainties and Test Tolerances for TC 9.2.4A.2	10.3.0	
2012-12 2012-12	RAN#58 RAN#58	R5-125576 R5-125812	0665 0653	-	Correction to Table 9.2.1.1.5-2 in subclause 9.2.1.1.5 Correction to RRM 9.3.1 in 36.521-3	10.3.0	
2012-12	RAN#58	R5-125813	0654	Ε	Addition of new TC 8.16.1 E-UTRAN FDD event triggered	10.3.0	
2012-12	IVAIN#30	110-120010	0054		reporting under deactivated SCell in non-DRX including uncertainties and Test Tolerances	10.5.0	10.4.0
2012-12	RAN#58	R5-125814	0655	-	Addition of new TC 8.16.2 E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX including	10.3.0	10.4.0
2012.42	DANHEO	DE 405005	0656	-	uncertainties and Test Tolerances	10.0.0	10.4.0
2012-12	RAN#58 RAN#58	R5-125865 R5-125878	0656 0657	-	Introduction of Band 27 to TS 36.521-3 Correction to TC 9.2.5.2 FDD Relative RSRQ for E-UTRA	10.3.0	10.4.0
2012-12	RAN#58	R5-125879	0658	-	Carrier Aggregation tests Correction to TC 9.2.6.2 TDD Relative RSRQ for E-UTRA		10.4.0
	RAN#58	R5-125888	0659	-	Carrier Aggregation tests Correction to accuracy requirements in RSRP/RSRQ test for	10.3.0	
2012-12	RAN#58	R5-125889	0660		Band 26in 36.521-3 Correction to RRM 9.4.1 in 36.521-3	10.3.0	
2012-12	RAN#58	R5-125922	0661	+-	Update Test Procedure and Test Tolerances for UE Transmit	10.3.0	
2012 12	10-11-00	10 120022	0001		Timing Accuracy	10.5.0	10.4.0
2012-12	RAN#58	R5-126045	0663	-	Addition of a new TC 9.1.7.1 TDD Absolute RSRP Accuracy E- UTRA for Carrier Aggregation	10.3.0	10.4.0
2012-12	RAN#58	R5-126046	0664	-	Addition of a new TC 9.1.7.2 TDD Relative RSRP Accuracy E- UTRA for Carrier Aggregation	10.3.0	10.4.0
2012-12	RAN#58	R5-126064	0662	-	Correction to RRM 4.2.7 in 36.521-3	10.3.0	
2013-03	RAN#59	R5-130058	0666	-	Uncertainties and Test Tolerances for RRM test cases 9.1.6.1 and 9.1.7.1		
2013-03	RAN#59	R5-130060	0667	-	Uncertainties and Test Tolerances for RRM test cases 9.1.6.2 and 9.1.7.2	10.4.0	
	RAN#59	R5-130062	0668	-	Uncertainties and Test Tolerances for RRM test cases 9.2.5.1 and 9.2.6.1	10.4.0	
2013-03		R5-130162		-	Modifying test requirements for handover test from E-UTRAN to UTRAN TDD		
2013-03 2013-03	RAN#59	R5-130290	0669	-	RRM: Corrections to TC 9.3.1		10.5.0
2013-03	RAN#59 RAN#59	R5-130300 R5-130301	0670 0671	-	RRM: Corrections to TC 9.6.1 RRM: Corrections to TC 9.6.2		10.5.0 10.5.0
2013-03	RAN#59	R5-130301	0671	1-	Editors note for test cases where Test Requirement not valid		10.5.0
2013-03	RAN#59	R5-130302	0673	_	above 3GHz Uncertainties and Test Tolerances for TC 6.3.1 Redirection		10.5.0
2013-03	RAN#59	R5-130395	0674	-	from E-UTRAN FDD to UTRAN FDD Uncertainties and Test Tolerances for TC 6.3.3 Redirection	10.4.0	
					from E- UTRAN FDD to GERAN when System Information is provided		
2013-03	RAN#59	R5-130397	0675	-	Uncertainties and Test Tolerances for TC 6.3.9 Redirection from E-UTRAN FDD to UTRAN FDD without System Information	10.4.0	10.5.0
2013-03	RAN#59	R5-130398	0676	-	Uncertainties and Test Tolerances for TC 6.3.10 Redirection from E-UTRAN FDD to GERANW hen System Information is not provided	10.4.0	10.5.0
2013-03	RAN#59	R5-130430	0677	-	Correction to RRM 4.2.7 and 4.2.8	10.4.0	10.5.0
2013-03	RAN#59	R5-130436	0678	<u>[</u> -	Update of cell configuration mapping in Annex E		10.5.0
2013-03	RAN#59	R5-130468	0706	-	Correction to RRM measurement accuracy tests	10.4.0	
2013-03	RAN#59	R5-130803	0680	-	Updates to TC 8.16.3 and 8.16.4		10.5.0
2013-03	RAN#59	R5-130931	0683	-	Update Test Procedure and Test Tolerances for UE Transmit Timing Accuracy		10.5.0
2013-03	RAN#59	R5-130932	0684	-	Uncertainties and Test Tolerances for RRM test cases 9.2.5.2 and 9.2.6.2		10.5.0
2013-03	RAN#59	R5-130934	0685	-	Test Tolerances to TCs 8.16.3 and 8.16.4 Event Triggered reporting on deactivated SCell with PCell interruption in non-DRX	10.4.0	10.5.0

2013-03	RAN#59	R5-130781	0686	I-	RRM: Updates and corrections to TC 8.1.5	10.4.0	10.5.0
2013-03	RAN#59	R5-130943	0687	-	Correction to sr-ConfigIndex in RRM FDD-TDD dual mode		10.5.0
					tests		
2013-03	RAN#59	R5-130953	0688	-	CA RRM: Corrections to tests with independent events		10.5.0
2013-03	RA N#59	R5-130962	0689	-	Add structure for new elCIC test cases 9.2.7.1 and 9.2.8.1, FDD and TDD RSRQ		10.5.0
2013-03	RAN#59	R5-130981	0690	-	Introduction of Chapter 9 RRM test cases for RSRP accuracy for FDD EUTRA -eICIC	10.4.0	10.5.0
2013-03	RAN#59	R5-130982	0691	-	Introduction of Chapter 9 RRM test cases for RSRP accuracy for TDD EUTRA -eICIC	10.4.0	10.5.0
2013-03	RAN#59	R5-130983	0692	-	Additions to TC 8.16.3 E-UTRAN FDD-FDD Event triggered	10.4.0	10.5.0
					reporting on deactivated SCell with PCell interruption in non-DRX		
2013-03	RAN#59	R5-130984	0693	-	Additions to TC 8.16.4 E-UTRAN TDD-TDD Event triggered reporting on deactivated SCell with PCell interruption in non-DRX	10.4.0	10.5.0
2013-03	RAN#59	R5-130985	0694	-	Additions to TC 9.2.5.1 FDD Absolute RSRQ for E-UTRA Carrier Aggregation tests	10.4.0	10.5.0
2013-03	RAN#59	R5-130986	0695	-	Additions to TC 9.2.5.2 FDD Relative RSRQ for E-UTRA Carrier Aggregation tests	10.4.0	10.5.0
2013-03	RAN#59	R5-130987	0696	-	Additions to TC 9.2.6.1 TDD Absolute RSRQ for E-UTRA Carrier Aggregation tests	10.4.0	10.5.0
2013-03	RAN#59	R5-130988	0697	-	Additions to TC 9.2.6.2 TDD Relative RSRQ for E-UTRA Carrier Aggregation tests		10.5.0
2013-03	RAN#59	R5-130989	0698	-	Updates to TC 8.16.1 and 8.16.2		10.5.0
2013-03 2013-03	RAN#59 RAN#59	R5-130990 R5-130991	0699 0700	-	Updates to TCs in section 8.20 Updates to TCs about FDD and TDD RSRP accuracy for E-		10.5.0
				-	UTRA CA		
2013-03	RA N#59	R5-130992	0701	-	Updates to TCs about FDD and TDD RSRQ accuracy for E- UTRA CA		10.5.0
2013-03	RAN#59	R5-130993	0702	-	Updates to H.4 default RRC message contentfor CA	10.4.0	
2013-03	RAN#59 RAN#59	R5-130995 R5-130782	0703 0704	-	Correction to RRC Connection Release with Redirection tests Correction to new CGI E-UTRA cell with autonomous gaps tests		10.5.0
2013-03	RAN#59	R5-130452	0679	-	Adding operating bands 28 and 44 to Annex I in TS36.521-3	10.5.0	11.0.0
2013-03	RAN#59	R5-130906	0681	-	Introduction of Band 44 for APAC 700 MHz		11.0.0
2013-03	RAN#59	R5-130907	0682	-	Introduction of Band 28 for APAC 700 MHz		11.0.0
2013-06	RAN#60	R5-131105	0707	-	Correction to Test requirement for tests 7.1.X	11.0.0	
2013-06 2013-06	RAN#60	R5-131109	0708	-	eICIC RRM: Addition of MBSFN ABS configuration in annex		11.1.0
2013-06	RAN#60 RAN#60	R5-131110 R5-131111	0709 0710	-	eICIC RRM: Further specification of TC 7.3.9 eICIC RRM: Further specification of TC 7.3.10		11.1.0
2013-06	RAN#60	R5-1311112	0711	-	eICIC RRM: Further specification of TC 7.3.11		11.1.0
2013-06	RAN#60	R5-131113	0712	-	elCIC RRM: Further specification of TC 7.3.12		11.1.0
2013-06	RAN#60	R5-131118	0713	-	CA RRM: References to connection diagrams		11.1.0
2013-06	RAN#60	R5-131148	0714	-	Updates to RRM test case for CA band combo CA_2A-29A		11.1.0
2013-06	RAN#60	R5-131177	0715	-	RRM: FGI bit support in test applicability statement		11.1.0
2013-06	RAN#60	R5-131178	0716	-	RRM TC 9.6: Clarification on testing requirement when no BCCH1 report available	11.0.0	
2013-06	RAN#60	R5-131180	0718	-	RRM: Uncertainties and test tolerances for TCs 8.1.5 and 8.1.6	11.0.0	
2013-06	RAN#60	R5-131182	0719	-	RRM: Uncertainties and test tolerances for TCs 8.3.4 and 8.3.5		11.1.0
2013-06	RAN#60	R5-131185	0720	<u> -</u>	RRM TC 8.14.2: Minor correction to cross references		11.1.0
2013-06	RAN#60	R5-131186	0721	<u> -</u>	RRM: Several corrections to CGI related test cases		11.1.0
2013-06	RAN#60	R5-131282	0722	-	Uncertainties and Test Tools for elCIC RRM test cases 9.2.7.1, 9.2.8.1		11.1.0
2013-06	RAN#60	R5-131286	0723		Uncertainties and Test Tools for RRM test cases 8.11.5, 8.11.6		11.1.0
2013-06	RAN#60	R5-131288	0724	<u> - </u>	Uncertainties and Test Tools for RRM test cases 9.5.1, 9.5.2		11.1.0
2013-06	RAN#60	R5-131291	0725	1-	Cleanup of Annex F Introductory Text		11.1.0
2013-06	RAN#60	R5-131403	0726	[Uncertainties and Test Tolerances for TS 36.521-3 test cases 5.2.4 and 5.2.5		11.1.0
2013-06	RAN#60	R5-131404	0727	[_	Uncertainties and Test Tolerances for TS 36.521-3 test case 8.5.4		11.1.0
2013-06	RAN#60	R5-131405	0728	<u> </u>	Uncertainties and Test Tolerances for TS 36.521-3 test cases 8.7.4 and 8.9.2		11.1.0
2013-06	RAN#60	R5-131445	0729	<u> -</u>	Addition of inter-freq/RAT without measurement gaps TCs		11.1.0
2013-06	RAN#60	R5-131463	0730	-	Uncertainties and Test Tolerances for RRM test cases 6.3.2 and 6.3.12	11.0.0	11.1.0
2013-06	RAN#60	R5-131468	0731	-	Uncertainties and Test Tolerances for RRM test cases 6.3.5+6.3.6+6.3.7+6.3.8		11.1.0
2013-06	RAN#60	R5-131469	0732	-	Modification to test cases 8.7.1 and 8.7.2		11.1.0
2013-06	RAN#60	R5-131517	0733	<u> - </u>	Corrections to RRM requirements for interruption in single CA	11.0.0	11.1.0

2013-06 RANNEO R-131586 0735 Correction to the test cases with the existence of non-allowed 10.00 11.1. 2013-06 RANNEO R-131591 0737 Correction to PRACH configuration 11.00 11.1. 2013-06 RANNEO R-131591 0737 Correction to PRACH configuration 11.00 11.1. 2013-06 RANNEO R-131611 0738 Editors note for test cases where Test Requirement not valid 11.00 11.1. 2013-06 RANNEO R-131613 0738 Editors note for test cases where Test Requirement not valid 11.00 11.1. 2013-06 RANNEO R-131613 0739 Editors note for test cases where Test Requirement not valid 11.00 11.1. 2013-06 RANNEO R-131913 0741 Counce for test cases where Test Requirement not valid 11.00 11.1. 2013-06 RANNEO R-131913 0741 Counce for test cases where Test Requirement not valid 11.00 11.1. 2013-06 RANNEO R-131922 0742 Counce Soft the Soft Counce of Soft Counce Soft Counc	2013-06	RAN#60	R5-131529	0734	T-	Corrections for RSRQ E-UTRA CA	11.0.0	11.1.0
CSC cell CSC cell					-			
2013-06 RANNERO R5-131613 0738	20.000		1.0 .0.000	0.00				
2013-06 RANN60 R5-131613 0738 Editors note for test cases where Test Requirement not valid 11.00 11.1.1	2013-06				-			
above 30Hz, clause 8 above 30Hz, clause 8					-			
above 3GHz, clause 8 - 9	2013-06	RAN#60	R5-131613		-	above 3GHz, clause 8		
2013-06 RANNBO R5-131740 0740 - Corrections of band 26 notes in TSS8.521-3 11.0.0 11.1.1 2013-06 RANNBO R5-131923 0741 - Change the IE value of System Information Block type 19 for 11.0.0 11.1.1 2013-06 RANNBO R5-131922 0742 - eICC RRM Further specification of TC 8.1.7 11.0.0 11.1.1 2013-06 RANNBO R5-131923 0743 - eICC RRM Further specification of TC 8.1.7 11.0.0 11.1.1 2013-06 RANNBO R5-131925 0745 - eICC RRM Further specification of TC 8.1.7 11.0.0 11.1.1 2013-06 RANNBO R5-131925 0745 - Structure for new TCs 9.1.8.1, 9.1.8.2, FDD Absolute and 11.0.0 11.1.1 2013-06 RANNBO R5-131926 0746 - Structure for new TCs 9.1.8.1, 9.1.9.2, FDD Absolute and 11.0.0 11.1.1 2013-06 RANNBO R5-131926 0746 - Procedure and messages for eICC RRM test cases 9.2.7.1, 11.0.0 11.1.1 2013-06 RANNBO R5-131926 0746 - Procedure and messages for eICC RRM test cases 9.2.7.1, 11.0.0 11.1.1 2013-06 RANNBO R5-131940 0748 - RRW Uncertainties and test tolerances for TCs 9.6.1 and 11.0.0 11.1.1 2013-06 RANNBO R5-131965 0749 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-131966 0750 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-131967 0751 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-131992 0755 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-131992 0755 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-131992 0755 - Correction to RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RANNBO R5-132107 0755 - Underted the RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-07 RANNBO R5-132107 0755 - Underted the RMC Connection Release with Redirection tests 11.0.0 11.1.1 2013-08 RANNBO R5-132107 0755 - Underted the RMC R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R5-133100 R	2013-06	RAN#60	R5-131615	0739	-		11.0.0	11.1.0
2013-06 RANN60 R5-131912 Off41 - Change the IE value of System Information Block type 19 for 11.0.0 11.1.	2013-06	RAN#60	R5-131740	0740	 -		11.0.0	11.1.0
2013-06 RAN860 R5-131922 0742 - eICK RRM Further specification of TC 8.1.7 11.0.0 11.1.1 2013-06 RAN860 R5-131924 0744 - eICK RRM Further specification of TC 8.2.5 11.0.0 11.1.1 2013-06 RAN860 R5-131924 0744 - eICK RRM Further specification of TC 8.2.5 11.0.0 11.1.1 2013-06 RAN860 R5-131924 0744 - eICK RRM Further specification of TC 8.2.5 11.0.0 11.1.1 2013-06 RAN860 R5-131925 0745 - Structure for new TCs 9.1.8.1, 9.1.9.2, TDD Absolute and Relative eICK CRSR, Non-MBSFN N CR	2013-06	RAN#60	R5-131913	0741	-			
2013-06 RANI#60 R5-131924 0744 - Structure for new TCs 9.1.8.1, 9.1.8.2, FED Absolute and 11.0.0 11.1.1 Relative eliCic RSRP, Non-MSSFN 1 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1 Per 1.0.0 11.1.1 Per 1.0.0 11.1 Per 1.0.0 Pe	2013-06	RAN#60	R5-131922	0742	 -		11.0.0	11.1.0
Relative elCiC RSRP, Non-MBSFN R5-131925 O745 Structure for new TCs 9.13, 19.19, 27, TDD Absolute and 11.0.0 11.1.1	2013-06	RAN#60	R5-131923	0743	 -	eICIC RRM: Further specification of TC 8.2.5	11.0.0	11.1.0
2013-06 RAN#60 R5-131925 0745 - Structure for new TCs 9.1.9.1, 9.1.9.2.1 TDD Absolute and 11.0.0 11.1.1 Relative elCic RSRP. Non-MSSTN	2013-06	RAN#60	R5-131924	0744	-		11.0.0	11.1.0
Procedure and messages for eICIC RRM test cases 9.2.7.1, 11.0.0 11.1.1	2013-06	RAN#60	R5-131925	0745	-	Structure for new TCs 9.1.9.1, 9.1.9.2, TDD Absolute and	11.0.0	11.1.0
2013-06 RAN#60 R5-131938 0747 Uncertainties and Test Tolerances for RRM test cases 6.3.4 11.0.0 11.1.1 and 6.3.1 11.0.0 11.1.1 2013-06 RAN#60 R5-131940 0748 - RRM: Uncertainties and test tolerances for TCs 9.6.1 and 11.0.0 11.1.1 2013-06 RAN#60 R5-131965 0750 - Correction to RRC Connection Release with Redirection tests 11.0.0 11.1.1 2013-06 RAN#60 R5-131967 0751 - Correction to the Unitary Timing Accuracy 11.0.0 11.1.1 2013-06 RAN#60 R5-131986 0752 - Editors note for test cases where Test Requirement not valid 11.0.0 11.1.1 2013-06 RAN#60 R5-131992 0753 - Addition of Chapter 9 RRM test cases for absolute RSRQ accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS Correction to new CGI E-UTRAN - E-UTRA and GSM cell 11.0.0 11.1.1 2013-06 RAN#60 R5-132107 0755 - Update of Annex E	2013-06	RAN#60	R5-131926	0746	-	Procedure and messages for elCIC RRM test cases 9.2.7.1,	11.0.0	11.1.0
2013-06 RAN#60 R5-131940 O748	2013-06	RAN#60	R5-131938	0747	-	Uncertainties and Test Tolerances for RRM test cases 6.3.4	11.0.0	11.1.0
2013-06 RAN#60 R5-131965 0749 Correction to RRC Connection Release with Redirection tests 11.0.0 11.1.1	2013-06	RAN#60	R5-131940	0748	-	RRM: Uncertainties and test tolerances for TCs 9.6.1 and	11.0.0	11.1.0
2013-06 RAN#60 R5-131967 O751 Correction to Monitored UTRA cell list size 11.0.0 11.1.1	2013-06	RAN#60	R5-131965	0749	+-	***-	11.0.0	11,1.0
2013-06 RAN#60 R5-131967 O751 -	2013-06				-			
above 3GHz, clauses 4 to 7 above 3GHz, clauses 4 to 7 accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS accuracy to Correction to new CGI E-UTRA cell with autonomous gaps 11.0.0 11.1.1 11.2.1 1	2013-06		R5-131967		 -	Correction to UE Transmit Timing Accuracy	11.0.0	11.1.0
2013-06 RAN#60 R5-131992 0753 - Addition of Chapter 9 RRM test cases for absolute RSRQ accuracy under Time-Domain Measurement Resource Restriction with MBSFN ABS (2013-06 RAN#60 R5-132075 0754 - Correction to new CGI E-UTRA cell with autonomous gaps 11.0.0 11.1.1 (2013-06 RAN#60 R5-132110 0756 - Correction to Combined E-UTRAN - E-UTRA and GSM cell 11.0.0 11.1.1 (2013-06 RAN#60 R5-132111 0757 - Addition of Band 27 to overlooked sections of TS 36.521-3 11.0.0 11.2.1 (2013-09 RAN#61 R5-133101 0758 - Uncertainties and Test Tolerances for eICIC Absolute RSRP 11.1.0 11.2.1 (2013-09 RAN#61 R5-133103 0759 - Uncertainties and Test Tolerances for eICIC Relative RSRP 11.1.0 11.2.1 (2013-09 RAN#61 R5-133104 0761 - Addition of test cases 9.1.8.2+9.1.9.2 (2013-09 RAN#61 R5-133354 0765 - RRM Uncertainties and Test Tolerances update for Inter-freq RSRP 11.1.0 11.2.1 (2013-09 RAN#61 R5-133354) 0766 - RRM Uncertainties and test tolerances for TCs 9.6.1 and 11.1.0 11.2.1 (2013-09 RAN#61 R5-133354) 0766 - Correction to Common Exception messages for ReportContiguate (2013-09 RAN#61 R5-133430 0767 - Correction to Common Exception messages for ReportContiguate (2013-09 RAN#61 R5-133430 0767 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#61 R5-133430 0767 - Correction to Common Exception messages for ReportContiguate (2013-09 RAN#61 R5-133430 0767 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#61 R5-133431 0769 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#61 R5-133431 0769 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#61 R5-133431 0769 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#61 R5-133441 0772 - Addition of TC 7.3.14 E-UTRAN TD Radio Link Monitoring Test for Un-d-syrue under Time Domain Measurement Resource Restriction with MBSFN ABS (eICC) (2013-09 RAN#61 R5-133441 0773 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 (2013-09 RAN#6	2013-06	RAN#60	R5-131986	0752	-		11.0.0	11.1.0
2013-06 RAN#60 R5-132075 O754 Correction to new CGI E-UTRA cell with autonomous gaps 11.0.0 11.1.1	2013-06	RAN#60	R5-131992	0753	-	Addition of Chapter 9 RRM test cases for absolute RSRQ accuracy under Time-Domain Measurement Resource	11.0.0	11.1.0
2013-06 RAN#60 R5-132107 0755 - Update of Annex E 11.0.0 11.1.1	2013-06	RAN#60	R5-132075	0754	-	Correction to new CGI E-UTRA cell with autonomous gaps	11.0.0	11.1.0
Search Search Search Search Search RAN#61 R5-133101 O758 Uncertainties and Test Tolerances for eIClC Absolute RSRP 11.1.0 11.2.1	2013-06	RAN#60	R5-132107	0755	 -		11.0.0	11.1.0
2013-09 RAN#61 R5-133101 0758 Uncertainties and Test Tolerances for eICIC Absolute RSRP 11.1.0 11.2.1 11.2.1 11.2.1 12.1.2 11.1.0 11.2.1 11	2013-06	RAN#60	R5-132112	0756	-		11.0.0	11.1.0
test cases 9.1.8.1+9.1.9.1 2013-09 RAN#61 R5-133103 0759 - Uncertainties and Test Tolerances for eICIC Relative RSRP 11.1.0 11.2.1 test cases 9.1.8.2+9.1.9.2 2013-09 RAN#61 R5-133105 0760 - Uncertainties and Test Tolerances update for Inter-freq RSRP 11.1.0 11.2.1 Test cases 9.1.8.2+9.1.9.2 2013-09 RAN#61 R5-133142 0761 - Addition of test cases 7.3.13 and 7.3.15 11.1.0 11.2.1 11.0 11.2.1 Addition of test cases 9.1.3.2 and 7.3.15 11.1.0 11.2.1 11.0 11.2.1	2013-06	RAN#60	R5-132114	0757	-	Addition of Band 27 to overlooked sections of TS 36.521-3	11.0.0	11.1.0
test cases 9.1.8.2+9.1.9.2	2013-09	RAN#61	R5-133101	0758	-		11.1.0	11.2.0
Test cases 9.1.3.x and 9.1.4x 2013-09 RAN#61 R5-133142 0761 - Addition of test cases 7.3.13 and 7.3.15 11.1.0 11.2.1 11.2.1 2013-09 RAN#61 R5-133351 0764 - Uncertainties and test tolerances update for Intra-freq RSRP 11.1.0 11.2.1 2013-09 RAN#61 R5-133354 0765 - Band 28 update for Intra-freq relative RSRP Test case 9.1.1.2 11.1.0 11.2.1 2013-09 RAN#61 R5-133421 0766 - Correction to Common Exception messages for ReportConfig- A6 Correction to 8.7.3 of 36.521-3 11.1.0 11.2.1 2013-09 RAN#61 R5-133432 0768 - Correction to 8.11.5 and 8.11.6 of 36.521-3 11.1.0 11.2.1 2013-09 RAN#61 R5-133433 0769 - Correction to 9.5.1 and 9.5.2 of 36.521-3 11.1.0 11.2.1 2013-09 RAN#61 R5-133435 0770 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.1 2013-09 RAN#61 R5-133440 0771 - Addition of TC 7.3.14 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133447 0772 - Addition of TC 7.3.16 E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133447 0773 - Corrections to Conditions for UE Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133722 0763 - Corrections to Conditions for UE Measurement Procedures in RRC_CONNECTED State Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.1 2013-09 RAN#61 R5-133727 0768 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.1 2013-09 RAN#61 R5-133728 0789 - Corrections to E-UTRAN RSRP and RSRQ accuracy for CA test cases 11.1.0 11.2.1 2013-09 RAN#61 R5-133728 0789 - Corrections to E-UTRAN RSRP and RSRQ accuracy for CA test cases 11.1.0 11.2.1 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test cases	2013-09	RAN#61	R5-133103	0759	-		11.1.0	11.2.0
RAN#61 R5-133220 0762 - RRM: Uncertainties and test tolerances for TCs 9.6.1 and 9.6.2 9.6.2 Uncertainties and Test Tolerances update for Intra-freq RSRP 11.1.0 11.2.1	2013-09	RAN#61	R5-133105	0760	-		11.1.0	11.2.0
9.6.2	2013-09	RAN#61	R5-133142	0761	-	Addition of test cases 7.3.13 and 7.3.15	11.1.0	11.2.0
Test cases 9.1.1.1 and 9.1.2.1	2013-09	RAN#61	R5-133220	0762	-		11.1.0	11.2.0
2013-09 RAN#61 R5-133421 0766 -	2013-09	RAN#61	R5-133351	0764	-	Test cases 9.1.1.1 and 9.1.2.1	11.1.0	11.2.0
A6 2013-09 RAN#61 R5-133430 0767 - Correction to 8.7.3 of 36.521-3 11.1.0 11.2.0 2013-09 RAN#61 R5-133432 0768 - Correction to 8.11.5 and 8.11.6 of 36.521-3 11.1.0 11.2.0 2013-09 RAN#61 R5-133433 0769 - Correction to 9.5.1 and 9.5.2 of 36.521-3 11.1.0 11.2.0 2013-09 RAN#61 R5-133435 0770 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.0 2013-09 RAN#61 R5-133441 0772 - Addition of TC 7.3.14 E-UTRAN TDD Radio Link Monitoring Test for Ut-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133447 0773 - Addition of TC 7.3.16 E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133447 0793 - Correction of configurations in RSRP TDD absolute and relative accuracy for CA test cases 2013-09 RAN#61 R5-133722 0763 - EICIC RRM: Message contents for TC-s 7.3.9-12, 8.1.7 and 11.1.0 11.2.0 2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction t	2013-09	RAN#61	R5-133354	0765	-	Band 28 update for Intra-freq relative RSRP Test case 9.1.1.2	11.1.0	11.2.0
2013-09 RAN#61 R5-133432 0768 -	2013-09	RAN#61	R5-133421	0766	-		11.1.0	11.2.0
2013-09 RAN#61 R5-133433 0769 - Correction to 9.5.1 and 9.5.2 of 36.521-3 11.1.0 11.2.0 2013-09 RAN#61 R5-133435 0770 - Correction to Common Exception messages in RLM tests 11.1.0 11.2.0 2013-09 RAN#61 R5-133440 0771 - Addition of TC 7.3.14 E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 11.1.0 11.2.0 2013-09 RAN#61 R5-133447 0772 - Addition of TC 7.3.16 E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 11.1.0 11.2.0 2013-09 RAN#61 R5-133447 0793 - Correction of configurations in RSRP TDD absolute and relative accuracy for CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133722 0763 - Corrections to Conditions for UE Measurements Procedures in RRC_CONNECTED State 11.1.0 11.2.0 2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E	2013-09				<u> </u>			
2013-09 RAN#61 R5-133435 0770 -	2013-09			0768	-			
RAN#61	2013-09				Ŀ			
Test for Out-of-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC)	2013-09				-			
2013-09 RAN#61 R5-133441 0772 - Addition of TC 7.3.16 E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource Restriction with MBSFN ABS (eICIC) 2013-09 RAN#61 R5-133447 0793 - Correction of configurations in RSRP TDD absolute and relative accuracy for CA test cases 11.1.0 11.2.0	2013-09	RAN#61	R5-133440	0771	-	Test for Out-of-sync under Time Domain Measurement	11.1.0	11.2.0
2013-09 RAN#61 R5-133447 0793 Correction of configurations in RSRP TDD absolute and relative accuracy for CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133528 0773 - Corrections to Conditions for UE Measurements Procedures in RRC_CONNECTED State 11.1.0 11.2.0 2013-09 RAN#61 R5-133722 0763 - eICIC RRM: Message contents for TC-s 7.3.9-12, 8.1.7 and 8.2.5 11.1.0 11.2.0 2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0	2013-09	RAN#61	R5-133441	0772	-	Addition of TC 7.3.16 E-UTRAN TDD Radio Link Monitoring Test for In-sync under Time Domain Measurement Resource	11.1.0	11.2.0
2013-09 RAN#61 R5-133528 0773 Corrections to Conditions for UE Measurements Procedures in RRC_CONNECTED State 2013-09 RAN#61 R5-133722 0763 - eICIC RRM: Message contents for TC-s 7.3.9-12, 8.1.7 and 8.2.5 11.1.0 11.2.0 2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0	2013-09	RAN#61	R5-133447	0793	-	Correction of configurations in RSRP TDD absolute and	11.1.0	11.2.0
2013-09 RAN#61 R5-133722 0763 - eICIC RRM: Message contents for TC-s 7.3.9-12, 8.1.7 and 8.2.5 11.1.0 11.2.0 2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0	2013-09	RAN#61	R5-133528	0773	-	Corrections to Conditions for UE Measurements Procedures in	11.1.0	11.2.0
2013-09 RAN#61 R5-133727 0788 - Corrections to RRM CA measurement accuracy CA test cases 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0	2013-09	RAN#61	R5-133722	0763	-	eICIC RRM: Message contents for TC-s 7.3.9-12, 8.1.7 and	11.1.0	11.2.0
2013-09 RAN#61 R5-133728 0789 - Correction to E-UTRAN RSRP and RSRQ accuracy for CA test 11.1.0 11.2.0 cases of 36.521-3	2013-09	RAN#61	R5-133727	0788	-	Corrections to RRM CA measurement accuracy CA test cases	11.1.0	11.2.0
	2013-09	RAN#61	R5-133728	0789	-	Correction to E-UTRAN RSRP and RSRQ accuracy for CA test	11.1.0	11.2.0
	2013-09	RAN#61	R5-133729	0791	† -	Correction to CGI test cases	11.1.0	11.2.0

					-		
2013-09	RAN#61	R5-133809	0774	-	Correction to RRM CA test case 8.16.1	11.1.0	11.2.0
2013-09	RAN#61	R5-133810	0775	-	Correction to RRM CA test case 8.16.3	11.1.0	11.2.0
2013-09	RAN#61	R5-133813	0776	-	Correction to 8.11.4 InterRAT E-UTRA TDD to E-UTRA TDD and UTRA TDD cell search	11.1.0	11.2.0
2013-09	RAN#61	R5-133814	0777	-	Addition of Uplink-dow nlink configuration in 6.3.5 of 36.521-3	11.1.0	11.2.0
2013-09	RAN#61	R5-133836	0778	-	Cell Timing offsets and Cell Timing uncertainties for CA 8.x and 9.x test cases	11.1.0	11.2.0
2013-09	RAN#61	R5-133842	0779	-	Correction to 9.6.1 and 9.6.2 of 36.521-3	11.1.0	11.2.0
2013-09	RAN#61	R5-133855	0780	-	Addition of new CA TC 8.16.5 E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandw idth	11.1.0	11.2.0
2013-09	RAN#61	R5-133856	0781	-	Addition of new CA TC 8.16.6 E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz bandw idth	11.1.0	11.2.0
2013-09	RAN#61	R5-133857	0782	-	Addition of new CA TC 9.2.12.1 TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133858	0783	-	Addition of new CA TC 9.2.12.2 TDD Relative RSRQ Accuracy for E-UTRA Carrier Aggregation for 20MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133859	0784	-	Correction to RRM CA test case 8.20.1	11.1.0	11.2.0
2013-09	RAN#61	R5-133860	0785	-	New RRMTC 9.1.13.2 TDD Relative RSRP Accuracy for E- UTRA Carrier Aggregation for 20 MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133861	0786	-	New RRMTC 9.1.13.1 TDD Absolute RSRP Accuracy for E- UTRA Carrier Aggregation for 20 MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133862	0787	-	Cell configuration mapping for new CA TCs for 20MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133896	0790	-	Addition of RMC and OCNG pattern for CA 20 MHz	11.1.0	11.2.0
2013-09	RAN#61	R5-133901	0792	-	CA RRM: Clarification of applicability and completeness status of CA RRMTC-s	11.1.0	11.2.0