18.3 Radio Bearer Tests for 7.68 Mcps TDD option

18.3.1 General information for radio bearer tests (7.68 Mcps TDD)

The purpose of these radio bearer test cases is to test properly the Reference Radio Bearer configurations included in TS34.108 [9], clause 6.11.6 for 7.68 Mcps TDD option.

The applicability of radio bearer tests is dependent on the UE uplink and downlink radio access capabilities and UE support tele- and bearer-services.

For radio bearer combinations which are representative to multiple traffic classes, such as “Interactive or Background”, “Streaming or Interactive or Background” etc, then it is only required to execute the radio bearer test procedure once using one of the applicable traffic class for the UE under test.

NOTE: As the purpose of the radio bearer test cases is to functionally verify that the UE is able to establish the radio bearer combination, and to verify correct data transfer using the different transport formats, then the necessary test coverage is achieved by performing the radio bearer test procedure once for one of the applicable traffic classes.

18.3.1.1 Generic radio bearer test procedure for Single RB configuration

See 14.1.1 for test procedure

18.3.1.2 Generic test procedure for testing multi-RB configuration and simultaneous signalling

See 14.1.2 for test procedure

18.3.1.2a Generic test procedure for testing multi-RB combinations and simultaneous signalling in case of DSCH

This procedure is used to test multiple radio bearer combinations where PS data goes on the DSCH. This procedure is also used to verify simultaneous transmission and reception of user data and signalling data.

18.3.1.2a.1 Initial conditions

UE in idle mode

18.3.1.2a.2 Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.11.6 for the actual radio bearer test. For the case when the reference radio bearer configuration includes radio bearers for both CS and PS domain then the radio bearer setup procedure has to be performed once per domain. The first radio bearer setup procedure shall perform configuration of the physical channel for the radio bearer combination under test as well as the transport channels for the CS radio bearer(s), also the transport format combination set for only CS radio bearers has to be provided. The second radio bearer procedure shall perform the configuration for the transport channel for the PS radio bearers.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. Here first time only the TFCs for the data on CS RAB and the data on PS RAB are restricted.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 1.

d) The SS transmits test data on all radio bearers under test. The number of RLC SDUs to transmit every TTI and the size "Test data size" is specified for each sub-test of the actual radio bearer test. See note 2.

e) The SS checks that UE has looped back the data on the CS and PS Radio bearer.

f) The SS opens the UE test loop.

g) SS uses the RRC transport format combination control procedure. And now restricts the TFCs for the data on CS RAB and the data on PS RAB and also on SRB.

h) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

i) SS transmit data on the CS RAB a MEASUREMENT CONTROL message requesting periodic reporting with a period of T2.

j) SS transmits the data on PS RAB.

k) SS waits the time equal to 2 times T2

l) SS checks that, for all radio bearers under test, the content of the received RLC SDUs have the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loop back of RLC SDUs.

m) The SS opens the UE test loop.

n) (Void)

o) Steps b) to m) are repeated for all sub-tests

p) The SS may optionally release the radio bearer.

q) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. Selection of UL RLC SDU size for the different radio bearers under test should be such that the UE returns data in sub-sequent TTIs without causing the UE transmission buffer to become full. To achieve this the UL RLC SDU size shall be set to UL TF payload size under test, minus the size of length indicator and expansion bit, and divided by the ratio between downlink and uplink TTI. E.g. for a AM radio bearer having the uplink RLC payload size equal to 320, the downlink TTI equal to 10 ms, and the uplink TTI equal to 20 ms, then for the transport format 4x336 (TF payload size = 4x320=1280 bits) the UL RLC SDU size parameter should be set to 632 bits (=1280bits/(20ms/10ms) - 8 bits).

NOTE 2: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

NOTE 3: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signalling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

Expected sequence

CS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		<--	PAGING TYPE 1 (PCCH)	Paging (CS domain, TMSI)
3		-->	RRC CONNECTION REQUEST (CCCH)	RRC
4		<--	RRC CONNECTION SETUP (CCCH)	RRC
5		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6		-->	PAGING RESPONSE (DCCH)	RR
6a		<--	AUTHENTICATION REQUEST	
6b		-->	AUTHENTICATION RESPONSE	
6c		<--	SECURITY MODE COMMAND	
6d		-->	SECURITY MODE COMPLETE	

PS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1		<--	SYSTEM INFORMATION (BCCH)	Broadcast
2		<--	PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
3		-->	RRC CONNECTION REQUEST (CCCH)	RRC
4		<--	RRC CONNECTION SETUP (CCCH)	RRC
5		-->	RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6a		-->	SERVICE REQUEST (DCCH)	GMM
6b		<--	SECURITY MODE COMMAND	RRC see note 1
6c		-->	SECURITY MODE COMPLETE	RRC see note 1

NOTE 1 In addition to activate integrity protection Step 6b and Step 6c are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.

Expected sequence for DSCH multi RAB test cases.

Step	Direction		Message	Comments
	UE	SS		
1..6	<-- -->		Paging	Use the CS paging procedure for testing of CS and combined CS/PS reference radio bearer configurations. Use the PS paging procedure for testing of PS reference radio bearer configurations.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
Case A: CS or PS radio bearers only				
A9	←		RADIO BEARER SETUP (DCCH)	RRC
A10	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
Case B: CS + PS radio bearers				
B9	←		RADIO BEARER SETUP (DCCH)	RRC CS radio bearer(s) are configured
B10	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
B10a	←		SECURITY MODE COMMAND	See Note
B10b	→		SECURITY MODE COMPLETE	RRC
B10c	←		RADIO BEARER SETUP (DCCH)	RRC PS radio bearer(s) are configured
B10c	→		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations are limited to "Restricted UL TFCIs", as specified for the sub-test. Here the UL TFS are restricted to test the simultaneous data on CS and PS RAB.
12	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14a	<--		Test data (DTCH 1) and Test data on DTCH 2	SS Sends the data on the CS RAB (DPCH).SS Sends the data on the PS RAB .(PDSCH) (NOTE 1)
14b	→		Test data (DTCH 1) + Test Data (DTCH 2)	SS Receives the data on CS RAB, PS RAB
14c	<--		OPEN UE TEST LOOP (DCCH)	TC
14d	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
15a	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test Here the UL TFS are restricted to test the simultaneous data on CS and PS RAB and SRB

Step	Direction		Message	Comments
	UE	SS		
15b	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
15c	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
15d	<--		Test data (DTCH 1) and Test data on DTCH 2	SS Sends the data on the CS RAB (DPCH). SS Sends the data on the PS RAB. (PDSCH) (NOTE 1)
15e	←		MEASUREMENT CONTROL (DCCH)	SS sends a MEASUREMENT CONTROL message simultaneously to the test data requesting periodic reporting at interval T2 (NOTE 1)
15f	--> --> MEASUREMENT REPORT (DCCH)		Test data (DTCH 1) + Test Data (DTCH 2)	SS Receives the data on CS RAB, PS RAB and the Measurement Control Report. SS Shall get at least on measurement Control report message (NOTE 1)
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every sub-test.	
19			RB RELEASE (DCCH)	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step
21	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step
NOTE. For case B (CS+PS radio bearers) the second security mode procedure is needed to enable testing of ciphering on the PS radio bearers. For the CS domain the security mode procedure is performed as part of the CS paging procedure.				

NOTE 1:

Here using the test steps 11 to 14d, the simultaneous data on the CS and PS RAB can be tested.

And using the steps 15a to 15f, the simultaneous data on CS RAB, PS RAB and SRB can be tested.

For testing the simultaneous data on CS RAB, PS RAB and SRB, following procedure is used.

First data on the CS RAB is sent. Then in the next step Measurement Control message is sent.

In the Downlink the restricted transport format combination will be (1 1), that SS MAC has to send the data on CS RAB and the measurement control message on SRB simultaneously.

Here it is assumed that, since the transport format combination (1, 0) (that is send only data) will not be available in the DL, the MAC has to wait until it gets something to transmit on the SRB.

Then data on the PS RAB is sent.

With this on the UE UL Side, the data will be available on both CS and PS RAB and also on the SRB. With this the transport format combination (1,1, 1) that is simultaneous data on RAB and SRB can be tested in the uplink.

Specific message contents

RADIO BEARER SETUP message: AM or UM (Packet to CELL_DCH from CELL_DCH in PS))

Information Element	Value/remark
New DSCH-RNTI	0000 0000 0000 0010B
RRC State indicator	CELL_DCH
RAB information for setup	
- RB mapping info	
- Information for each multiplexing option	1 RBMuxOptions
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	DCH
- UL Transport channel identity	1
- Logical channel identity	Not Present
- CHOICE RLC size list	Configured
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- Number of downlink RLC logical channels	1
- Downlink transport channel type	DSCH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	19
- Logical channel identity	1
Added or Reconfigured TrCH information list	1 DCH added, 1 DCH reconfigured
DL Transport channel information common for all transport channel	
- SCCPCH TFCS	Not Present
- CHOICE mode	TDD
- Individual DL CCTrCH information	This number is of which of multiple CCTrCHs as indicated in TS34.108 clause 6.11.6.4 Parameter Set
- DL TFCS Identity	TFCS ID 1 or 2
- Shared Channel Indicator	FALSE
- CHOICE DL parameters	Independent
- DL TFCS	
- CHOICE TFCI signalling	Split
- Split Type	Normal
- TFCI Field 1 information	
- CHOICE TFCS representation	Complete reconfiguration
- TFCS complete reconfigure	
- CHOICE CTFC Size	
- CTFC information	This IE is repeated for TFC numbers and reference to TS34.108 clause 6.11.3.4
- CTFC	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Power offset information	Not present
Deleted TrCH information list	Not Present
Added or Reconfigured TrCH information list	
- Added or Reconfigured DL TrCH information	
- Downlink transport channel type	DSCH
- DL Transport channel identity	19
- CHOICE DL parameters	Explicit
- TFS	
- CHOICE Transport channel type	Dedicated transport channels
- Dynamic Transport format information	
- RLC Size	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Number of TBs and TTI List	(This IE is repeated for TFI number.)
- Transmission Time Interval	Not Present
- Number of Transport blocks	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Semi-static Transport Format information	
- Transmission time interval	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Type of channel coding	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Coding Rate	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Rate matching attribute	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- CRC size	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- DCH quality target	Not Present
- Downlink transport channel type	DCH
- DL Transport channel identity	10
- CHOICE DL parameters	Same as UL
- Uplink transport channel type	DCH

Information Element	Value/remark
- UL TrCH identity	5
- DCH quality target	
- BLER Quality value	-2.0
CHOICE channel requirement	Uplink DPCH info
- Uplink DPCH power control info	
- CHOICE Mode	TDD
- UL target SIR	Not Present
-CHOICE UL OL PC info	Broadcast UL OL PC info (NULL)
- CHOICE mode	TDD
- Uplink Timing Advance Control	Not Present
- UL CCTrCH List	1 or 2 Reference to TS34.108 clause 6.11.6.4 Parameter Set
- TFCS ID	1 or 2
- UL target SIR	0dB
- Timing info	
- Activation time	Now
- Duration	Infinite
- Common timeslot info	
- 2nd interleaver mode	Frame
- TFCI coding	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Puncturing limit	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Repetition period	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Repetition length	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- CHOICE TDD option	7.68 Mcps TDD
- Uplink DPCH timeslots and codes VHCR	
- Dynamic SF usage	FALSE
- First Individual timeslot info	
- Timeslot number	
- Timeslot number	(0..14)
- TFCI existence	TRUE
- Midamble Shift and burst type	
- Choice TDD option	7.68 Mcps TDD
- Choice Burst Type	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Midamble Allocation Mode	Default midamble
- Midamble Configuration	3 or 4 based on burst type
- CHOICE TDD option	7.68 Mcps TDD (no data)
- First timeslot Code List	1..2
- Channelisation Code	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- CHOICE more timeslots	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- UL CCTrCH List to Remove	If this test has only 1 CCTrCH Reference to TS34.108 clause 6.11.6.4 Parameter Set. If 2 CCTrCH then “Not Present”
- TFCS ID	2
CHOICE Mode	TDD (no data)
Downlink information common for all radio links	
- CHOICE DPCH info	Downlink DPCH info common for all RL
- Timing indicator	Maintain
- CFN-targetSFN frame offset	Not Present
- Downlink DPCH power control information	
- CHOICE Mode	TDD
- TPC Step Size	1
- MAC-d HFN initial value	Bit String(24)
- CHOICE Mode	TDD (no data)
- CHOICE Mode	TDD (no data)
- CHOICE TDD option	7.68 Mcps (no data)
- Default DPCH Offset Value	Not Present
Downlink information for each radio link list	
- Downlink information for each radio link	
- Choice mode	7.68 Mcps TDD
- Primary CCPCH info	
- CHOICE Mode	TDD
- CHOICE TDD option	7.68 Mcps TDD
- CHOICE SyncCase	Sync Case 1
- Timeslot	PCCPCH timeslot (0..14)
- Cell parameters ID	Same as cell (0..127)
- SCTD indicator	FALSE
- Downlink DPCH info for each RL	

Information Element	Value/remark
- CHOICE Mode	TDD
- DL CCTrCH List	1 or 2 Reference to TS34.108 clause 6.11.6.4 Parameter Set
- TFCS ID	1 or 2
- Timing info	
- Activation time	Now
- Duration	Infinite
- Common timeslot info	
- 2^{nd} interleaver mode	Frame
- TFCI coding	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Puncturing limit	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Repetition period	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Repetition length	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Downlink DPCH timeslots and codes VHCR	
- First Individual timeslot info	
- Timeslot number	
- Timeslot number	(0..14)
- TFCI existence	TRUE
- Midamble Shift and burst type	
- Choice TDD option	7.68 Mcps TDD
- Choice Burst Type	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- Midamble Allocation Mode	Default midamble
- Midamble Configuration	3 or 4 based on burst type
- CHOICE TDD option	7.68 Mcps TDD (no data)
- First timeslot channelisation codes VHCR	
- CHOICE codes representation	Bitmap
- Channelisation codes bitmap	Bit string(16) Reference to TS34.108 clause 6.11.6.4 Parameter Set
- CHOICE more timeslots	Reference to TS34.108 clause 6.11.6.4 Parameter Set
- UL CCTrCH TPC List	1 or 2 Reference to TS34.108 clause 6.11.6.4 Parameter Set
- UL TPC TFCS Identity	
- TFCS ID	1 or 2
- Shared Channel Indicator	FALSE
- UL CCTrCH List to Remove	If this test has only 1 CCTrCH Reference to TS34.108 clause 6.11.6.4 Parameter Set. If 2 CCTrCH then “Not Present”
- TFCS ID	2
- SCCPCH information for FACH	Not Present

18.3.1.3 Generic test procedure for testing Single Speech Radio Bearers on USCH/DSCH channels and multiple radio configuration signalling on RACH/FACH

This procedure is used to test single speech only PS radio bearer on DSCH and USCH and multiple configuration signal bearers on RACH/FACH

18.3.1.3.1 Initial conditions

UE in idle mode

18.3.1.3.2 Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.10 for the actual radio bearer test.

b) The SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure.

c) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 1.

d) The SS transmits test data on all radio bearers under test. The number of RLC SDUs to transmit every TTI and the size "Test data size" is specified for each sub-test of the actual radio bearer test. See note 2.

e) The SS checks that, for all radio bearers under test, the content of the received RLC SDU has the correct content and is received having the correct transport format.

f) The SS opens the UE test loop.

g) SS uses the RRC transport format combination control procedure. And now restricts the TFCs for the data on CS RAB and the data on PS RAB and also on SRB.

h) The SS closes the test loop using UE test loop mode 1 and setting the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test. See note 2.

i) SS transmit data on the CS RAB a MEASUREMENT CONTROL message requesting periodic reporting with a period of T2.

j) SS transmits the data on PS RAB.

k) SS waits the time equal to 2 times T2

l) SS checks that, for all radio bearers under test, the content of the received RLC SDUs have the correct content and is received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loop back of RLC SDUs.

m) The SS opens the UE test loop.

n) (Void)

o) Steps b) to m) are repeated for all sub-tests

p) The SS may optionally release the radio bearer.

q) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: Selection of UL RLC SDU size parameter:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall set the UL RLC SDU size equal to the UL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. Selection of UL RLC SDU size for the different radio bearers under test should be such that the UE returns data in sub-sequent TTIs without causing the UE transmission buffer to become full. To achieve this the UL RLC SDU size shall be set to UL TF payload size under test, minus the size of length indicator and expansion bit, and divided by the ratio between downlink and uplink TTI. E.g. for a AM radio bearer having the uplink RLC payload size equal to 320, the downlink TTI equal to 10 ms, and the uplink TTI equal to 20 ms, then for the transport format 4x336 (TF payload size = 4x320=1280 bits) the UL RLC SDU size parameter should be set to 632 bits (=1280bits/(20ms/10ms) - 8 bits).

NOTE 2: Selection of test data size:
For the case when the reference radio bearer configuration under test uses RLC transparent mode in downlink and is not configured for segmented operation then the radio bearer test case shall use a DL RLC SDU size (defined by the "Test data size" parameter) equal to the DL RLC PDU size. See [7] TS 25.322 for details regarding UE operation in RLC transparent mode. In case the reference radio bearer configuration under test does not use RLC transparent mode in downlink, the DL RLC SDU size/ test data size shall be set equal to the payload size of the DL TF under test minus the size of the length indicator and the expansion bit.

NOTE 3: The restricted set of TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signalling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

Expected sequence

PS paging procedure

Step	Direction		Message	Comments
	UE	SS		
1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
2	<--		PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
4	<--		RRC CONNECTION SETUP (CCCH)	RRC
5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
6a	-->		SERVICE REQUEST (DCCH)	GMM
6b	<--		SECURITY MODE COMMAND	RRC see note 1
6c	-->		SECURITY MODE COMPLETE	RRC see note 1

NOTE 1 In addition to activate integrity protection Step 6b and Step 6c are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.

Expected sequence for DSCH multi RAB test cases.

Step	Direction		Message	Comments
	UE	SS		
1..6	<-- -->		Paging	Use the CS paging procedure for testing of CS and combined CS/PS reference radio bearer configurations. Use the PS paging procedure for testing of PS reference radio bearer configurations.
7	<--		ACTIVATE RB TEST MODE (DCCH)	TC
8	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
9	<--		RADIO BEARER SETUP (DCCH)	RRC
10	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
CASE A: If DTCH on FACH/RACH				
A10a	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
A10b	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
A10c	<--		Test data (DTCH)	SS Sends the data on the FACH
A10d	-->		Test data (DTCH)	SS Receives the data on RACH
A10e			Repeat steps 10c to 10d for every RACH/FACH sub-test	
A10f	<--		OPEN UE TEST LOOP (DCCH)	TC
A10g	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
A10h	<--		PHYSICAL SHARED CHANNEL ALLOCATION (SHCCH)	This message is used by UTRAN to assign physical resources to USCH/DSCH transport channels in TDD, for temporary usage by the UE. UM on SHCCH
A10i	-->		PUSCH CAPACITY REQUEST (SHCCH)	Confirm establishment of PUSCH and PDSCH channels
CASE B: If No DTCH on FACH/RACH				
B10a	<--		PHYSICAL SHARED CHANNEL ALLOCATION (SHCCH)	This message is used by UTRAN to assign physical resources to USCH/DSCH transport channels in TDD, for temporary usage by the UE. UM on SHCCH
B10b	-->		PUSCH CAPACITY REQUEST (SHCCH)	Confirm establishment of PUSCH and PDSCH channels
11	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test Here the UL TFS are restricted to test the simultaneous data on CS and PS RAB.
12	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
13	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
14	<--		Test data (DTCH)	SS Sends the data on the PS RAB .(PDSCH) (NOTE 1)
15	-->		Test data (DTCH)	SS Receives the data on PS RAB
16	<--		OPEN UE TEST LOOP (DCCH)	TC
17	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
18			Repeat steps 11 to 17 for every Shared Ch sub-test	
19			RB RELEASE (DCCH)	RRC Optional step
20	<--		DEACTIVATE RB TEST MODE (DCCH)	TC Optional step

Step	Direction		Message	Comments
	UE	SS		
21	-->		DEACTIVATE RB TEST MODE COMPLETE (DCCH)	TC Optional step

18.3.1.4 General information interoperability radio bearer tests for HS-DSCH

18.3.1.4.1 HS-DSCH radio bearer test parameters

In the radio bearer tests on radio bearers mapped on HS-DSCH, the following UE specific parameters should be used.

Table 18.3.1.4.1.1: 7.68Mcps TDD HS-DSCH physical layer and RLC and MAC-hs parameters for 7.68Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
Category 1	32	1	12000	52992	6	50
Category 2	32	12	12000	52992	6	50
Category 3	32	2	24000	105984	6	50
Category 4	32	12	24000	105984	6	50
Category 5	32	3	36000	158976	6	100
Category 6	32	12	36000	158976	6	100
Category 7	32	4	53000	211968	6	150
Category 8	32	12	53000	211968	6	150
Category 9	32	5	73000	264960	8	150
Category 10	32	12	73000	264960	8	150
Category 11	32	8	106000	423936	8	200
Category 12	32	12	106000	423936	8	200
Category 13	32	12	204000	635904	8	400

18.3.1.4.2 Selecting TFRC test points

18.3.1.4.2.1 Principle

The principle for selecting TFRC test points is the same as specified for FDD in section 14.1.3.2.1 except the following:

a) A total of 3 HARQ processes are assumed.

b) Burst type 1 is assumed when calculating the number of physical channel bits (N_{phy_bits}) so that 1 HS-DSCH code in 1 TS carries 244bits for QPSK and 488bits for 16QAM.

c) The number of HS-DSCH codes allocated in the HS-SCCH is termed N_{codes} and the number of TS allocated in the HS-SCCH is termed N_{TS} and thus the code rate is determined by:

$$Coding\_rate = (TB_{size} + N_{CRC}) / (N_{codes} * N_{TS} * N_{phy\_bits})$$

d) The number of MAC-d PDUs, N_PDU can be incremented until N_PDU is 318.

e) The HS-SCCH signalling is such that it is only possible to allocate resources in a rectangular fashion; i.e. 21 resource units can be allocated by 3 SF32 codes over 7 timeslots. However it is not possible to make an allocation of 3 SF32 codes in TS2 and 2 SF32 codes in TS3

Note that the number of codes allocated, N_{codes}, and the number of TS, N_{TS}, allocated in the HS-SCCH are used in the tables in sections 18.3.1.4.3 and 18.3.1.4.4.

18.3.1.4.3 TFRC test points for MAC-d PDU size=336

Table 18.3.1.4.3.1: TFRC test points for UE category 1 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	$N_{codes}*N_{TS}$ allocated in HS-SCCH	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	32	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	32	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	32	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	32	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	32	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	32	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	32	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	32	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	32	285	
16	5397	16 QAM	32	285	
17	5733	QPSK	32	288	
17	5733	16 QAM	32	288	
18	6069	QPSK	32	293	
18	6069	16 QAM	32	292	
19	6405	QPSK	32	295	
19	6405	16 QAM	32	295	
20	6741	QPSK	32	300	
20	6741	16 QAM	32	299	
21	7077	QPSK	32	302	
21	7077	16 QAM	32	302	
22	7413	QPSK	32	304	
22	7413	16 QAM	32	304	
23	7749	QPSK	32	307	
23	7749	16 QAM	32	307	
24	8085	16 QAM	32	310	

25	8421	16 QAM	32	312	
26	8757	16 QAM	32	315	
27	9093	16 QAM	32	317	
28	9429	16 QAM	32	319	
29	9765	16 QAM	32	322	
30	10101	16 QAM	32	324	
31	10437	16 QAM	32	326	
32	10773	16 QAM	32	328	
33	11109	16 QAM	32	330	
34	11445	16 QAM	32	332	
35	11781	16 QAM	32	333	

Table 18.3.1.4.3.2: TFRC test points for UE category 2 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	4	115	
2	693	QPSK	8	156	
2	693	16 QAM	8	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	12	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	16	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	21	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	25	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	29	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	33	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	36	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	40	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	45	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	50	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	54	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	58	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	63	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	66	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	70	288	
18	6069	QPSK	72	292	
18	6069	16 QAM	72	292	
19	6405	QPSK	72	295	
19	6405	16 QAM	72	295	
20	6741	QPSK	72	299	
20	6741	16 QAM	72	299	
21	7077	QPSK	72	302	
21	7077	16 QAM	72	302	
22	7413	QPSK	72	304	
22	7413	16 QAM	72	304	
23	7749	QPSK	72	307	
23	7749	16 QAM	72	307	
24	8085	QPSK	72	310	
24	8085	16 QAM	72	310	

25	8421	QPSK	72	312	
25	8421	16 QAM	72	312	
26	8757	QPSK	72	315	
26	8757	16 QAM	72	315	
27	9093	QPSK	72	317	
27	9093	16 QAM	72	317	
28	9429	QPSK	72	319	
28	9429	16 QAM	72	319	
29	9765	QPSK	72	322	
29	9765	16 QAM	72	322	
30	10101	QPSK	72	324	
30	10101	16 QAM	72	324	
31	10437	QPSK	72	326	
31	10437	16 QAM	72	326	
32	10773	QPSK	72	328	
32	10773	16 QAM	72	328	
33	11109	QPSK	72	330	
33	11109	16 QAM	72	330	
34	11445	QPSK	72	332	
34	11445	16 QAM	72	332	
35	11781	QPSK	72	333	
35	11781	16 QAM	72	333	

Table 18.3.1.4.3.3: TFRC test points for UE category 3 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	32	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	44	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	62	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	64	285	
16	5397	16 QAM	32	285	
17	5733	QPSK	64	288	
17	5733	16 QAM	34	288	
18	6069	QPSK	64	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	64	295	
19	6405	16 QAM	38	295	
20	6741	QPSK	64	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	64	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	64	304	
22	7413	16 QAM	44	304	
23	7749	QPSK	64	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	64	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	64	312	
25	8421	16 QAM	50	312	
26	8757	QPSK	64	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	64	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	64	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	64	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	64	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	64	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	64	328	
32	10773	16 QAM	64	328	
33	11109	QPSK	64	330	
33	11109	16 QAM	64	330	
34	11445	QPSK	64	332	
34	11445	16 QAM	64	332	
35	11781	QPSK	64	333	
35	11781	16 QAM	64	333	
36	12117	QPSK	64	336	
36	12117	16 QAM	64	335	
37	12453	QPSK	64	337	
37	12453	16 QAM	64	337	
38	12789	QPSK	64	339	
38	12789	16 QAM	64	339	
39	13125	QPSK	64	340	
39	13125	16 QAM	64	340	
40	13461	QPSK	64	343	
40	13461	16 QAM	64	342	
41	13797	QPSK	64	343	
41	13797	16 QAM	64	343	
42	14133	QPSK	64	345	
42	14133	16 QAM	64	345	
43	14469	QPSK	64	346	
43	14469	16 QAM	64	346	
44	14805	QPSK	64	348	
44	14805	16 QAM	64	348	
45	15141	QPSK	64	349	
45	15141	16 QAM	64	349	
46	15477	QPSK	64	350	
46	15477	16 QAM	64	350	
47	15813	16 QAM	64	352	
48	16149	16 QAM	64	353	
49	16485	16 QAM	64	354	
50	16821	16 QAM	64	356	
51	17157	16 QAM	64	357	
52	17493	16 QAM	64	358	
53	17829	16 QAM	64	359	
54	18165	16 QAM	64	360	
55	18501	16 QAM	64	362	

56	18837	16 QAM	64	363	
57	19173	16 QAM	64	364	
58	19509	16 QAM	64	365	
59	19845	16 QAM	64	366	
60	20181	16 QAM	64	367	
61	20517	16 QAM	64	368	
62	20853	16 QAM	64	369	
63	21189	16 QAM	64	370	
64	21525	16 QAM	64	371	
65	21861	16 QAM	64	372	
66	22197	16 QAM	64	373	
67	22533	16 QAM	64	374	
68	22869	16 QAM	64	375	
69	23205	16 QAM	64	376	
70	23541	16 QAM	64	377	
71	23877	16 QAM	64	380	

Table 18.3.1.4.3.4: TFRC test points for UE category 4 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	144	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	144	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	144	337	
37	12453	16 QAM	72	337	
38	12789	QPSK	144	339	
38	12789	16 QAM	72	339	
39	13125	QPSK	144	340	
39	13125	16 QAM	72	340	
40	13461	QPSK	144	342	
40	13461	16 QAM	72	342	
41	13797	QPSK	144	343	
41	13797	16 QAM	72	343	
42	14133	QPSK	144	345	
42	14133	16 QAM	72	345	
43	14469	QPSK	144	346	
43	14469	16 QAM	72	346	
44	14805	QPSK	144	348	
44	14805	16 QAM	72	348	
45	15141	QPSK	144	349	
45	15141	16 QAM	72	349	
46	15477	QPSK	144	350	
46	15477	16 QAM	72	350	
47	15813	QPSK	144	352	
47	15813	16 QAM	72	352	
48	16149	QPSK	144	353	
48	16149	16 QAM	72	353	
49	16485	QPSK	144	354	
49	16485	16 QAM	72	354	
50	16821	QPSK	144	356	
50	16821	16 QAM	72	356	
51	17157	QPSK	144	357	

51	17157	16 QAM	72	357	
52	17493	QPSK	144	358	
52	17493	16 QAM	72	358	
53	17829	QPSK	144	359	
53	17829	16 QAM	72	359	
54	18165	QPSK	144	360	
54	18165	16 QAM	72	360	
55	18501	QPSK	144	362	
55	18501	16 QAM	72	362	
56	18837	QPSK	144	363	
56	18837	16 QAM	72	363	
57	19173	QPSK	144	364	
57	19173	16 QAM	72	364	
58	19509	QPSK	144	365	
58	19509	16 QAM	72	365	
59	19845	QPSK	144	366	
59	19845	16 QAM	72	366	
60	20181	QPSK	144	367	
60	20181	16 QAM	72	367	
61	20517	QPSK	144	368	
61	20517	16 QAM	72	368	
62	20853	QPSK	144	369	
62	20853	16 QAM	72	369	
63	21189	QPSK	144	370	
63	21189	16 QAM	72	370	
64	21525	QPSK	144	371	
64	21525	16 QAM	72	371	
65	21861	QPSK	144	372	
65	21861	16 QAM	72	372	
66	22197	QPSK	144	373	
66	22197	16 QAM	72	373	
67	22533	QPSK	144	374	
67	22533	16 QAM	72	374	
68	22869	QPSK	144	375	
68	22869	16 QAM	72	375	
69	23205	QPSK	144	376	
69	23205	16 QAM	72	376	
70	23541	QPSK	144	377	
70	23541	16 QAM	72	377	
71	23877	QPSK	144	378	
71	23877	16 QAM	72	378	

Table 18.3.1.4.3.5: TFRC test points for UE category 5 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	69	288	
17	5733	16 QAM	34	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	87	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	90	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	93	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	96	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	96	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	96	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	96	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	96	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	96	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	96	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	96	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	96	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	96	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	96	332	
34	11445	16 QAM	69	332	
35	11781	QPSK	96	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	96	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	96	337	
37	12453	16 QAM	75	337	
38	12789	QPSK	96	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	96	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	96	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	96	343	
41	13797	16 QAM	84	343	
42	14133	QPSK	96	345	
42	14133	16 QAM	87	345	
43	14469	QPSK	96	346	
43	14469	16 QAM	87	346	
44	14805	QPSK	96	348	
44	14805	16 QAM	90	348	
45	15141	QPSK	96	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	96	350	
46	15477	16 QAM	93	350	
47	15813	QPSK	96	352	
47	15813	16 QAM	96	352	
48	16149	QPSK	96	353	
48	16149	16 QAM	96	353	
49	16485	QPSK	96	354	
49	16485	16 QAM	96	354	
50	16821	QPSK	96	356	
50	16821	16 QAM	96	356	
51	17157	QPSK	96	357	

51	17157	16 QAM	96	357	
52	17493	QPSK	96	358	
52	17493	16 QAM	96	358	
53	17829	QPSK	96	359	
53	17829	16 QAM	96	359	
54	18165	QPSK	96	362	
54	18165	16 QAM	96	360	
55	18501	QPSK	96	362	
55	18501	16 QAM	96	362	
56	18837	QPSK	96	363	
56	18837	16 QAM	96	363	
57	19173	QPSK	96	364	
57	19173	16 QAM	96	364	
58	19509	QPSK	96	365	
58	19509	16 QAM	96	365	
59	19845	QPSK	96	366	
59	19845	16 QAM	96	366	
60	20181	QPSK	96	367	
60	20181	16 QAM	96	367	
61	20517	QPSK	96	368	
61	20517	16 QAM	96	368	
62	20853	QPSK	96	369	
62	20853	16 QAM	96	369	
63	21189	QPSK	96	371	
63	21189	16 QAM	96	370	
64	21525	QPSK	96	371	
64	21525	16 QAM	96	371	
65	21861	QPSK	96	372	
65	21861	16 QAM	96	372	
66	22197	QPSK	96	373	
66	22197	16 QAM	96	373	
67	22533	QPSK	96	374	
67	22533	16 QAM	96	374	
68	22869	QPSK	96	375	
68	22869	16 QAM	96	375	
69	23205	16 QAM	96	376	
70	23541	16 QAM	96	377	
71	23877	16 QAM	96	378	
72	24213	16 QAM	96	378	
73	24549	16 QAM	96	379	
74	24885	16 QAM	96	380	
75	25221	16 QAM	96	381	
76	25557	16 QAM	96	382	
77	25893	16 QAM	96	383	
78	26229	16 QAM	96	383	
79	26565	16 QAM	96	384	
80	26901	16 QAM	96	385	
81	27237	16 QAM	96	386	
82	27573	16 QAM	96	386	
83	27909	16 QAM	96	387	
84	28245	16 QAM	96	388	
85	28581	16 QAM	96	389	
86	28917	16 QAM	96	389	

87	29253	16 QAM	96	390	
88	29589	16 QAM	96	391	
89	29925	16 QAM	96	392	
90	30261	16 QAM	96	392	
91	30597	16 QAM	96	393	
92	30933	16 QAM	96	394	
93	31269	16 QAM	96	394	
94	31605	16 QAM	96	395	
95	31941	16 QAM	96	396	
96	32277	16 QAM	96	396	
97	32613	16 QAM	96	397	
98	32949	16 QAM	96	398	
99	33285	16 QAM	96	398	
100	33621	16 QAM	96	399	
101	33957	16 QAM	96	399	
102	34293	16 QAM	96	400	
103	34629	16 QAM	96	401	
104	34965	16 QAM	96	401	
105	35301	16 QAM	96	402	
106	35637	16 QAM	96	405	
107	35973	16 QAM	96	405	

Table 18.3.1.4.3.6: TFRC test points for UE category 6 for MAC-d PDU size=336, 3.84Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	165	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	170	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	187	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	190	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	209	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	

51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	217	359	
53	17829	16 QAM	108	359	*
54	18165	QPSK	217	360	*
54	18165	16 QAM	108	360	
55	18501	QPSK	217	362	
55	18501	16 QAM	108	362	
56	18837	QPSK	217	363	
56	18837	16 QAM	108	363	
57	19173	QPSK	217	364	
57	19173	16 QAM	108	364	
58	19509	QPSK	217	365	
58	19509	16 QAM	108	365	
59	19845	QPSK	217	366	
59	19845	16 QAM	108	366	
60	20181	QPSK	217	367	
60	20181	16 QAM	108	367	
61	20517	QPSK	217	368	
61	20517	16 QAM	108	368	
62	20853	QPSK	217	369	
62	20853	16 QAM	108	369	
63	21189	QPSK	217	370	
63	21189	16 QAM	108	370	
64	21525	QPSK	217	371	
64	21525	16 QAM	108	371	
65	21861	QPSK	217	372	
65	21861	16 QAM	108	372	
66	22197	QPSK	217	373	
66	22197	16 QAM	108	373	
67	22533	QPSK	217	374	
67	22533	16 QAM	108	374	
68	22869	QPSK	217	375	
68	22869	16 QAM	108	375	
69	23205	QPSK	217	376	
69	23205	16 QAM	108	376	
70	23541	QPSK	217	377	
70	23541	16 QAM	108	377	
71	23877	QPSK	217	378	
71	23877	16 QAM	108	378	
72	24213	QPSK	217	378	
72	24213	16 QAM	108	378	
73	24549	QPSK	217	379	
73	24549	16 QAM	108	379	
74	24885	QPSK	217	380	
74	24885	16 QAM	108	380	
75	25221	QPSK	217	381	
75	25221	16 QAM	108	381	
76	25557	QPSK	217	382	
76	25557	16 QAM	108	382	
77	25893	QPSK	217	383	
77	25893	16 QAM	108	383	

78	26229	QPSK	217	383	
78	26229	16 QAM	108	383	
79	26565	QPSK	217	384	
79	26565	16 QAM	108	384	
80	26901	QPSK	217	385	
80	26901	16 QAM	108	385	
81	27237	QPSK	217	386	
81	27237	16 QAM	108	386	
82	27573	QPSK	217	386	
82	27573	16 QAM	108	386	
83	27909	QPSK	217	387	
83	27909	16 QAM	108	387	
84	28245	QPSK	217	388	
84	28245	16 QAM	108	388	
85	28581	QPSK	217	389	
85	28581	16 QAM	108	389	
86	28917	QPSK	217	389	
86	28917	16 QAM	108	389	
87	29253	QPSK	217	390	
87	29253	16 QAM	108	390	
88	29589	QPSK	217	391	
88	29589	16 QAM	108	391	
89	29925	QPSK	217	392	
89	29925	16 QAM	108	392	
90	30261	QPSK	217	392	
90	30261	16 QAM	108	392	
91	30597	QPSK	217	393	
91	30597	16 QAM	108	393	
92	30933	QPSK	217	394	
92	30933	16 QAM	108	394	
93	31269	QPSK	217	394	
93	31269	16 QAM	108	394	
94	31605	QPSK	217	395	
94	31605	16 QAM	108	395	
95	31941	QPSK	217	396	
95	31941	16 QAM	108	396	
96	32277	QPSK	217	396	
96	32277	16 QAM	108	396	
97	32613	QPSK	217	397	
97	32613	16 QAM	108	397	
98	32949	QPSK	217	398	
98	32949	16 QAM	108	398	
99	33285	QPSK	217	398	
99	33285	16 QAM	108	398	
100	33621	QPSK	217	399	
100	33621	16 QAM	108	399	
101	33957	QPSK	217	399	
101	33957	16 QAM	108	399	
102	34293	QPSK	217	400	
102	34293	16 QAM	108	400	
103	34629	QPSK	217	401	
103	34629	16 QAM	108	401	
104	34965	QPSK	217	401	

104	34965	16 QAM	108	401	
105	35301	QPSK	217	402	
105	35301	16 QAM	108	402	
106	35637	QPSK	217	403	
106	35637	16 QAM	108	403	
107	35973	QPSK	217	403	
107	35973	16 QAM	108	403	

Table 18.3.1.4.3.7: TFRC test points for UE category 7 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	69	288	
17	5733	16 QAM	34	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	90	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	93	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	100	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	120	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	124	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	128	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	128	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	128	332	
34	11445	16 QAM	69	332	
35	11781	QPSK	128	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	128	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	128	337	
37	12453	16 QAM	76	337	
38	12789	QPSK	128	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	128	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	128	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	128	343	
41	13797	16 QAM	84	343	
42	14133	QPSK	128	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	128	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	128	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	128	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	128	350	
46	15477	16 QAM	93	350	
47	15813	QPSK	128	352	
47	15813	16 QAM	96	352	
48	16149	QPSK	128	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	128	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	128	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	128	357	

51	17157	16 QAM	104	357	
52	17493	QPSK	128	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	128	359	
53	17829	16 QAM	108	359	
54	18165	QPSK	128	360	
54	18165	16 QAM	108	360	
55	18501	QPSK	128	362	
55	18501	16 QAM	112	362	
56	18837	QPSK	128	363	
56	18837	16 QAM	116	363	
57	19173	QPSK	128	364	
57	19173	16 QAM	116	364	
58	19509	QPSK	128	365	
58	19509	16 QAM	120	365	
59	19845	QPSK	128	366	
59	19845	16 QAM	120	366	
60	20181	QPSK	128	367	
60	20181	16 QAM	124	367	
61	20517	QPSK	128	368	
61	20517	16 QAM	124	368	
62	20853	QPSK	128	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	128	370	
63	21189	16 QAM	128	370	
64	21525	QPSK	128	371	
64	21525	16 QAM	128	371	
65	21861	QPSK	128	372	
65	21861	16 QAM	128	372	
66	22197	QPSK	128	373	
66	22197	16 QAM	128	373	
67	22533	QPSK	128	374	
67	22533	16 QAM	128	374	
68	22869	QPSK	128	375	
68	22869	16 QAM	128	375	
69	23205	QPSK	128	376	
69	23205	16 QAM	128	376	
70	23541	QPSK	128	377	
70	23541	16 QAM	128	377	
71	23877	QPSK	128	380	
71	23877	16 QAM	128	378	
72	24213	QPSK	128	380	
72	24213	16 QAM	128	378	
73	24549	QPSK	128	380	
73	24549	16 QAM	128	379	
74	24885	QPSK	128	380	
74	24885	16 QAM	128	380	
75	25221	QPSK	128	381	
75	25221	16 QAM	128	381	
76	25557	QPSK	128	382	
76	25557	16 QAM	128	382	
77	25893	QPSK	128	383	
77	25893	16 QAM	128	383	

78	26229	QPSK	128	383	
78	26229	16 QAM	128	383	
79	26565	QPSK	128	384	
79	26565	16 QAM	128	384	
80	26901	QPSK	128	385	
80	26901	16 QAM	128	385	
81	27237	QPSK	128	386	
81	27237	16 QAM	128	386	
82	27573	QPSK	128	386	
82	27573	16 QAM	128	386	
83	27909	QPSK	128	387	
83	27909	16 QAM	128	387	
84	28245	QPSK	128	389	
84	28245	16 QAM	128	388	
85	28581	QPSK	128	389	
85	28581	16 QAM	128	389	
86	28917	QPSK	128	389	
86	28917	16 QAM	128	389	
87	29253	QPSK	128	390	
87	29253	16 QAM	128	390	
88	29589	QPSK	128	391	
88	29589	16 QAM	128	391	
89	29925	QPSK	128	392	
89	29925	16 QAM	128	392	
90	30261	QPSK	128	392	
90	30261	16 QAM	128	392	
91	30597	QPSK	128	393	
91	30597	16 QAM	128	393	
92	30933	16 QAM	128	394	
93	31269	16 QAM	128	394	
94	31605	16 QAM	128	395	
95	31941	16 QAM	128	396	
96	32277	16 QAM	128	396	
97	32613	16 QAM	128	397	
98	32949	16 QAM	128	398	
99	33285	16 QAM	128	398	
100	33621	16 QAM	128	399	
101	33957	16 QAM	128	399	
102	34293	16 QAM	128	400	
103	34629	16 QAM	128	401	
104	34965	16 QAM	128	401	
105	35301	16 QAM	128	402	
106	35637	16 QAM	128	403	
107	35973	16 QAM	128	403	
108	36309	16 QAM	128	404	
109	36645	16 QAM	128	404	
110	36981	16 QAM	128	405	
111	37317	16 QAM	128	405	
112	37653	16 QAM	128	406	
113	37989	16 QAM	128	406	
114	38325	16 QAM	128	407	
115	38661	16 QAM	128	408	
116	38997	16 QAM	128	408	

117	39333	16 QAM	128	409	
118	39669	16 QAM	128	409	
119	40005	16 QAM	128	410	
120	40341	16 QAM	128	410	
121	40677	16 QAM	128	411	
122	41013	16 QAM	128	411	
123	41349	16 QAM	128	412	
124	41685	16 QAM	128	412	
125	42021	16 QAM	128	413	
126	42357	16 QAM	128	413	
127	42693	16 QAM	128	414	
128	43029	16 QAM	128	414	
129	43372	16 QAM	128	415	
130	43708	16 QAM	128	415	
131	44044	16 QAM	128	416	
132	44380	16 QAM	128	416	
133	44716	16 QAM	128	417	
134	45052	16 QAM	128	417	
135	45388	16 QAM	128	418	
136	45724	16 QAM	128	418	
137	46060	16 QAM	128	419	
138	46396	16 QAM	128	419	
139	46732	16 QAM	128	419	
140	47068	16 QAM	128	420	
141	47404	16 QAM	128	420	
142	47740	16 QAM	128	423	
143	48076	16 QAM	128	423	
144	48412	16 QAM	128	423	
145	48748	16 QAM	128	423	
146	49084	16 QAM	128	423	
147	49420	16 QAM	128	423	
148	49756	16 QAM	128	423	
149	50092	16 QAM	128	424	
150	50428	16 QAM	128	424	
151	50764	16 QAM	128	425	
152	51100	16 QAM	128	425	
153	51436	16 QAM	128	425	
154	51772	16 QAM	128	427	
155	52108	16 QAM	128	427	
156	52444	16 QAM	128	427	
157	52780	16 QAM	128	427	

Table 18.3.1.4.3.8: TFRC test points for UE category 8 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	165	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	170	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	187	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	190	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	209	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	

51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	220	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	220	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	231	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	234	363	
56	18837	16 QAM	117	363	
57	19173	QPSK	234	364	
57	19173	16 QAM	119	364	
58	19509	QPSK	242	365	
58	19509	16 QAM	121	365	
59	19845	QPSK	243	366	
59	19845	16 QAM	121	366	
60	20181	QPSK	250	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	253	368	
61	20517	16 QAM	126	368	
62	20853	QPSK	256	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	261	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	264	371	
64	21525	16 QAM	133	371	
65	21861	QPSK	270	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	275	373	
66	22197	16 QAM	136	373	
67	22533	QPSK	280	374	
67	22533	16 QAM	140	374	
68	22869	QPSK	280	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	288	376	
69	23205	16 QAM	144	376	
70	23541	QPSK	289	377	
70	23541	16 QAM	144	377	
71	23877	QPSK	289	378	
71	23877	16 QAM	144	378	
72	24213	QPSK	289	378	
72	24213	16 QAM	144	378	
73	24549	QPSK	289	379	
73	24549	16 QAM	144	379	
74	24885	QPSK	289	380	
74	24885	16 QAM	144	380	
75	25221	QPSK	289	381	
75	25221	16 QAM	144	381	
76	25557	QPSK	289	382	
76	25557	16 QAM	144	382	
77	25893	QPSK	289	383	
77	25893	16 QAM	144	383	

78	26229	QPSK	289	383	
78	26229	16 QAM	144	383	
79	26565	QPSK	289	384	
79	26565	16 QAM	144	384	
80	26901	QPSK	289	385	
80	26901	16 QAM	144	385	
81	27237	QPSK	289	386	
81	27237	16 QAM	144	386	
82	27573	QPSK	289	386	
82	27573	16 QAM	144	386	
83	27909	QPSK	289	387	
83	27909	16 QAM	144	387	
84	28245	QPSK	289	388	
84	28245	16 QAM	144	388	
85	28581	QPSK	289	389	
85	28581	16 QAM	144	389	
86	28917	QPSK	289	389	
86	28917	16 QAM	144	389	
87	29253	QPSK	289	390	
87	29253	16 QAM	144	390	
88	29589	QPSK	289	391	
88	29589	16 QAM	144	391	
89	29925	QPSK	289	392	
89	29925	16 QAM	144	392	
90	30261	QPSK	289	392	
90	30261	16 QAM	144	392	
91	30597	QPSK	289	393	
91	30597	16 QAM	144	393	
92	30933	QPSK	289	394	
92	30933	16 QAM	144	394	
93	31269	QPSK	289	394	
93	31269	16 QAM	144	394	
94	31605	QPSK	289	395	
94	31605	16 QAM	144	395	
95	31941	QPSK	289	396	
95	31941	16 QAM	144	396	
96	32277	QPSK	289	396	
96	32277	16 QAM	144	396	
97	32613	QPSK	289	397	
97	32613	16 QAM	144	397	
98	32949	QPSK	289	398	
98	32949	16 QAM	144	398	
99	33285	QPSK	289	398	
99	33285	16 QAM	144	398	
100	33621	QPSK	289	399	
100	33621	16 QAM	144	399	
101	33957	QPSK	289	399	
101	33957	16 QAM	144	399	
102	34293	QPSK	289	400	
102	34293	16 QAM	144	400	
103	34629	QPSK	289	401	
103	34629	16 QAM	144	401	
104	34965	QPSK	289	401	

104	34965	16 QAM	144	401	
105	35301	QPSK	289	402	
105	35301	16 QAM	144	402	
106	35637	QPSK	289	403	
106	35637	16 QAM	144	403	
107	35973	QPSK	289	403	
107	35973	16 QAM	144	403	
108	36309	QPSK	289	404	
108	36309	16 QAM	144	404	
109	36645	QPSK	289	404	
109	36645	16 QAM	144	404	
110	36981	QPSK	289	405	
110	36981	16 QAM	144	405	
111	37317	QPSK	289	405	
111	37317	16 QAM	144	405	
112	37653	QPSK	289	406	
112	37653	16 QAM	144	406	
113	37989	QPSK	289	406	
113	37989	16 QAM	144	406	
114	38325	QPSK	289	407	
114	38325	16 QAM	144	407	
115	38661	QPSK	289	408	
115	38661	16 QAM	144	408	
116	38997	QPSK	289	408	
116	38997	16 QAM	144	408	
117	39333	QPSK	289	409	
117	39333	16 QAM	144	409	
118	39669	QPSK	289	409	
118	39669	16 QAM	144	409	
119	40005	QPSK	289	410	
119	40005	16 QAM	144	410	
120	40341	QPSK	289	410	
120	40341	16 QAM	144	410	
121	40677	QPSK	289	411	
121	40677	16 QAM	144	411	
122	41013	QPSK	289	411	
122	41013	16 QAM	144	411	
123	41349	QPSK	289	412	
123	41349	16 QAM	144	412	
124	41685	QPSK	289	412	
124	41685	16 QAM	144	412	
125	42021	QPSK	289	413	
125	42021	16 QAM	144	413	
126	42357	QPSK	289	413	
126	42357	16 QAM	144	413	
127	42693	QPSK	289	414	
127	42693	16 QAM	144	414	
128	43029	QPSK	289	414	
128	43029	16 QAM	144	414	
129	43372	QPSK	289	415	
129	43372	16 QAM	144	415	
130	43708	QPSK	289	415	
130	43708	16 QAM	144	415	

131	44044	QPSK	289	416	
131	44044	16 QAM	144	416	
132	44380	QPSK	289	416	
132	44380	16 QAM	144	416	
133	44716	QPSK	289	417	
133	44716	16 QAM	144	417	
134	45052	QPSK	289	417	
134	45052	16 QAM	144	417	
135	45388	QPSK	289	418	
135	45388	16 QAM	144	418	
136	45724	QPSK	289	418	
136	45724	16 QAM	144	418	
137	46060	QPSK	289	419	
137	46060	16 QAM	144	419	
138	46396	QPSK	289	419	
138	46396	16 QAM	144	419	
139	46732	QPSK	289	419	
139	46732	16 QAM	144	419	
140	47068	QPSK	289	420	
140	47068	16 QAM	144	420	
141	47404	QPSK	289	420	
141	47404	16 QAM	144	420	
142	47740	QPSK	289	421	
142	47740	16 QAM	144	421	
143	48076	QPSK	289	421	
143	48076	16 QAM	144	421	
144	48412	QPSK	289	422	
144	48412	16 QAM	144	422	
145	48748	QPSK	289	422	
145	48748	16 QAM	144	422	
146	49084	QPSK	289	422	
146	49084	16 QAM	144	422	
147	49420	QPSK	289	423	
147	49420	16 QAM	144	423	
148	49756	QPSK	289	423	
148	49756	16 QAM	144	423	
149	50092	QPSK	289	424	
149	50092	16 QAM	144	424	
150	50428	QPSK	289	424	
150	50428	16 QAM	144	424	
151	50764	QPSK	289	425	
151	50764	16 QAM	144	425	
152	51100	QPSK	289	425	
152	51100	16 QAM	144	425	
153	51436	QPSK	289	425	
153	51436	16 QAM	144	425	
154	51772	QPSK	289	426	
154	51772	16 QAM	144	426	
155	52108	QPSK	289	426	
155	52108	16 QAM	144	426	
156	52444	QPSK	289	427	
156	52444	16 QAM	144	427	
157	52780	QPSK	289	427	

157	52780	16 QAM	144	427	

Table 18.3.1.4.3.9: TFRC test points for UE category 9 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	90	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	

25	8421	QPSK	100	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	120	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	130	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	135	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	145	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	150	337	
37	12453	16 QAM	76	337	
38	12789	QPSK	155	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	160	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	160	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	160	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	160	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	160	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	160	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	160	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	160	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	160	352	
47	15813	16 QAM	96	352	
48	16149	QPSK	160	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	160	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	160	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	160	357	

51	17157	16 QAM	105	357	
52	17493	QPSK	160	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	160	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	160	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	160	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	160	363	
56	18837	16 QAM	116	363	
57	19173	QPSK	160	364	
57	19173	16 QAM	116	364	
58	19509	QPSK	160	365	
58	19509	16 QAM	120	365	
59	19845	QPSK	160	366	
59	19845	16 QAM	120	366	
60	20181	QPSK	160	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	160	368	
61	20517	16 QAM	125	368	
62	20853	QPSK	160	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	160	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	160	371	
64	21525	16 QAM	130	371	
65	21861	QPSK	160	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	160	373	
66	22197	16 QAM	135	373	
67	22533	QPSK	160	374	
67	22533	16 QAM	140	374	
68	22869	QPSK	160	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	160	376	
69	23205	16 QAM	140	376	
70	23541	QPSK	160	377	
70	23541	16 QAM	145	377	
71	23877	QPSK	160	378	
71	23877	16 QAM	145	378	
72	24213	QPSK	160	378	
72	24213	16 QAM	145	378	
73	24549	QPSK	160	379	
73	24549	16 QAM	150	379	
74	24885	QPSK	160	380	
74	24885	16 QAM	150	380	
75	25221	QPSK	160	381	
75	25221	16 QAM	155	381	
76	25557	QPSK	160	382	
76	25557	16 QAM	155	382	
77	25893	QPSK	160	383	
77	25893	16 QAM	160	383	

78	26229	QPSK	160	383	
78	26229	16 QAM	160	383	
79	26565	QPSK	160	384	
79	26565	16 QAM	160	384	
80	26901	QPSK	160	385	
80	26901	16 QAM	160	385	
81	27237	QPSK	160	386	
81	27237	16 QAM	160	386	
82	27573	QPSK	160	386	
82	27573	16 QAM	160	386	
83	27909	QPSK	160	387	
83	27909	16 QAM	160	387	
84	28245	QPSK	160	388	
84	28245	16 QAM	160	388	
85	28581	QPSK	160	389	
85	28581	16 QAM	160	389	
86	28917	QPSK	160	389	
86	28917	16 QAM	160	389	
87	29253	QPSK	160	390	
87	29253	16 QAM	160	390	
88	29589	QPSK	160	391	
88	29589	16 QAM	160	391	
89	29925	QPSK	160	393	
89	29925	16 QAM	160	392	
90	30261	QPSK	160	393	
90	30261	16 QAM	160	392	
91	30597	QPSK	160	393	
91	30597	16 QAM	160	393	
92	30933	QPSK	160	394	
92	30933	16 QAM	160	394	
93	31269	QPSK	160	394	
93	31269	16 QAM	160	394	
94	31605	QPSK	160	395	
94	31605	16 QAM	160	395	
95	31941	QPSK	160	396	
95	31941	16 QAM	160	396	
96	32277	QPSK	160	396	
96	32277	16 QAM	160	396	
97	32613	QPSK	160	397	
97	32613	16 QAM	160	397	
98	32949	QPSK	160	398	
98	32949	16 QAM	160	398	
99	33285	QPSK	160	398	
99	33285	16 QAM	160	398	
100	33621	QPSK	160	399	
100	33621	16 QAM	160	399	
101	33957	QPSK	160	399	
101	33957	16 QAM	160	399	
102	34293	QPSK	160	400	
102	34293	16 QAM	160	400	
103	34629	QPSK	160	401	
103	34629	16 QAM	160	401	
104	34965	QPSK	160	401	

104	34965	16 QAM	160	401	
105	35301	QPSK	160	403	
105	35301	16 QAM	160	402	
106	35637	QPSK	160	403	
106	35637	16 QAM	160	403	
107	35973	QPSK	160	403	
107	35973	16 QAM	160	403	
108	36309	QPSK	160	404	
108	36309	16 QAM	160	404	
109	36645	QPSK	160	404	
109	36645	16 QAM	160	404	
110	36981	QPSK	160	405	
110	36981	16 QAM	160	405	
111	37317	QPSK	160	405	
111	37317	16 QAM	160	405	
112	37653	QPSK	160	406	
112	37653	16 QAM	160	406	
113	37989	QPSK	160	406	
113	37989	16 QAM	160	406	
114	38325	QPSK	160	407	
114	38325	16 QAM	160	407	
115	38661	16 QAM	160	408	
116	38997	16 QAM	160	408	
117	39333	16 QAM	160	409	
118	39669	16 QAM	160	409	
119	40005	16 QAM	160	410	
120	40341	16 QAM	160	410	
121	40677	16 QAM	160	411	
122	41013	16 QAM	160	411	
123	41349	16 QAM	160	412	
124	41685	16 QAM	160	412	
125	42021	16 QAM	160	413	
126	42357	16 QAM	160	413	
127	42693	16 QAM	160	414	
128	43029	16 QAM	160	414	
129	43372	16 QAM	160	415	
130	43708	16 QAM	160	415	
131	44044	16 QAM	160	416	
132	44380	16 QAM	160	416	
133	44716	16 QAM	160	417	
134	45052	16 QAM	160	417	
135	45388	16 QAM	160	418	
136	45724	16 QAM	160	418	
137	46060	16 QAM	160	419	
138	46396	16 QAM	160	419	
139	46732	16 QAM	160	419	
140	47068	16 QAM	160	420	
141	47404	16 QAM	160	420	
142	47740	16 QAM	160	421	
143	48076	16 QAM	160	421	
144	48412	16 QAM	160	422	
145	48748	16 QAM	160	422	
146	49084	16 QAM	160	422	

147	49420	16 QAM	160	423	
148	49756	16 QAM	160	423	
149	50092	16 QAM	160	424	
150	50428	16 QAM	160	424	
151	50764	16 QAM	160	425	
152	51100	16 QAM	160	425	
153	51436	16 QAM	160	425	
154	51772	16 QAM	160	426	
155	52108	16 QAM	160	426	
156	52444	16 QAM	160	427	
157	52780	16 QAM	160	427	
158	53116	16 QAM	160	427	
159	53452	16 QAM	160	428	
160	53788	16 QAM	160	428	
161	54124	16 QAM	160	429	
162	54460	16 QAM	160	429	
163	54796	16 QAM	160	429	
164	55132	16 QAM	160	430	
165	55468	16 QAM	160	430	
166	55804	16 QAM	160	431	
167	56140	16 QAM	160	431	
168	56476	16 QAM	160	431	
169	56812	16 QAM	160	432	
170	57148	16 QAM	160	432	
171	57484	16 QAM	160	432	
172	57820	16 QAM	160	433	
173	58156	16 QAM	160	433	
174	58492	16 QAM	160	433	
175	58828	16 QAM	160	434	
176	59164	16 QAM	160	434	
177	59500	16 QAM	160	437	
178	59836	16 QAM	160	437	
179	60172	16 QAM	160	437	
180	60508	16 QAM	160	437	
181	60844	16 QAM	160	437	
182	61180	16 QAM	160	437	
183	61516	16 QAM	160	437	
184	61852	16 QAM	160	437	
185	62188	16 QAM	160	437	
186	62524	16 QAM	160	438	
187	62860	16 QAM	160	438	
188	63196	16 QAM	160	438	
189	63532	16 QAM	160	439	
190	63868	16 QAM	160	439	
191	64204	16 QAM	160	439	
192	64540	16 QAM	160	441	
193	64876	16 QAM	160	441	
194	65212	16 QAM	160	441	
195	65548	16 QAM	160	441	
196	65884	16 QAM	160	441	
197	66220	16 QAM	160	441	
198	66556	16 QAM	160	442	
199	66892	16 QAM	160	442	

200	67228	16 QAM	160	442	
201	67564	16 QAM	160	442	
202	67900	16 QAM	160	443	
203	68236	16 QAM	160	443	
204	68572	16 QAM	160	443	
205	68908	16 QAM	160	444	
206	69244	16 QAM	160	444	
207	69580	16 QAM	160	444	
208	69916	16 QAM	160	445	
209	70252	16 QAM	160	445	
210	70588	16 QAM	160	445	
211	70924	16 QAM	160	445	
212	71260	16 QAM	160	446	
213	71596	16 QAM	160	446	
214	71932	16 QAM	160	446	
215	72268	16 QAM	160	447	
216	72604	16 QAM	160	447	
217	72940	16 QAM	160	447	

Table 18.3.1.4.3.10: TFRC test points for UE category 10 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	

15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	
25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	165	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	170	343	

41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	187	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	190	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	209	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	
51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	220	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	220	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	231	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	234	363	
56	18837	16 QAM	117	363	
57	19173	QPSK	234	364	
57	19173	16 QAM	119	364	
58	19509	QPSK	242	365	
58	19509	16 QAM	121	365	
59	19845	QPSK	243	366	
59	19845	16 QAM	121	366	
60	20181	QPSK	250	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	253	368	
61	20517	16 QAM	126	368	
62	20853	QPSK	256	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	261	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	264	371	
64	21525	16 QAM	133	371	
65	21861	QPSK	270	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	275	373	
66	22197	16 QAM	136	373	
67	22533	QPSK	280	374	
67	22533	16 QAM	140	374	

68	22869	QPSK	280	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	288	376	
69	23205	16 QAM	144	376	
70	23541	QPSK	290	377	
70	23541	16 QAM	145	377	
71	23877	QPSK	297	378	
71	23877	16 QAM	147	378	
72	24213	QPSK	297	378	
72	24213	16 QAM	147	378	
73	24549	QPSK	300	379	
73	24549	16 QAM	150	379	
74	24885	QPSK	308	380	
74	24885	16 QAM	154	380	
75	25221	QPSK	312	381	
75	25221	16 QAM	156	381	
76	25557	QPSK	312	382	
76	25557	16 QAM	156	382	
77	25893	QPSK	320	383	
77	25893	16 QAM	161	383	
78	26229	QPSK	320	383	
78	26229	16 QAM	161	383	
79	26565	QPSK	324	384	
79	26565	16 QAM	162	384	
80	26901	QPSK	330	385	
80	26901	16 QAM	165	385	
81	27237	QPSK	336	386	
81	27237	16 QAM	168	386	
82	27573	QPSK	336	386	
82	27573	16 QAM	168	386	
83	27909	QPSK	341	387	
83	27909	16 QAM	171	387	
84	28245	QPSK	348	388	
84	28245	16 QAM	175	388	
85	28581	QPSK	352	389	
85	28581	16 QAM	176	389	
86	28917	QPSK	352	389	
86	28917	16 QAM	176	389	
87	29253	QPSK	360	390	
87	29253	16 QAM	180	390	
88	29589	QPSK	360	391	
88	29589	16 QAM	180	391	
89	29925	QPSK	361	392	
89	29925	16 QAM	180	392	
90	30261	QPSK	361	392	
90	30261	16 QAM	180	392	
91	30597	QPSK	361	393	
91	30597	16 QAM	180	393	
92	30933	QPSK	361	394	
92	30933	16 QAM	180	394	
93	31269	QPSK	361	394	
93	31269	16 QAM	180	394	
94	31605	QPSK	361	395	

94	31605	16 QAM	180	395	
95	31941	QPSK	361	396	
95	31941	16 QAM	180	396	
96	32277	QPSK	361	396	
96	32277	16 QAM	180	396	
97	32613	QPSK	361	397	
97	32613	16 QAM	180	397	
98	32949	QPSK	361	398	
98	32949	16 QAM	180	398	
99	33285	QPSK	361	398	
99	33285	16 QAM	180	398	
100	33621	QPSK	361	399	
100	33621	16 QAM	180	399	
101	33957	QPSK	361	399	
101	33957	16 QAM	180	399	
102	34293	QPSK	361	400	
102	34293	16 QAM	180	400	
103	34629	QPSK	361	401	
103	34629	16 QAM	180	401	
104	34965	QPSK	361	401	
104	34965	16 QAM	180	401	
105	35301	QPSK	361	402	
105	35301	16 QAM	180	402	
106	35637	QPSK	361	403	
106	35637	16 QAM	180	403	
107	35973	QPSK	361	403	
107	35973	16 QAM	180	403	
108	36309	QPSK	361	404	
108	36309	16 QAM	180	404	
109	36645	QPSK	361	404	
109	36645	16 QAM	180	404	
110	36981	QPSK	361	405	
110	36981	16 QAM	180	405	
111	37317	QPSK	361	405	
111	37317	16 QAM	180	405	
112	37653	QPSK	361	406	
112	37653	16 QAM	180	406	
113	37989	QPSK	361	406	
113	37989	16 QAM	180	406	
114	38325	QPSK	361	407	
114	38325	16 QAM	180	407	
115	38661	QPSK	361	408	
115	38661	16 QAM	180	408	
116	38997	QPSK	361	408	
116	38997	16 QAM	180	408	
117	39333	QPSK	361	409	
117	39333	16 QAM	180	409	
118	39669	QPSK	361	409	
118	39669	16 QAM	180	409	
119	40005	QPSK	361	410	
119	40005	16 QAM	180	410	
120	40341	QPSK	361	410	
120	40341	16 QAM	180	410	

121	40677	QPSK	361	411	
121	40677	16 QAM	180	411	
122	41013	QPSK	361	411	
122	41013	16 QAM	180	411	
123	41349	QPSK	361	412	
123	41349	16 QAM	180	412	
124	41685	QPSK	361	412	
124	41685	16 QAM	180	412	
125	42021	QPSK	361	413	
125	42021	16 QAM	180	413	
126	42357	QPSK	361	413	
126	42357	16 QAM	180	413	
127	42693	QPSK	361	414	
127	42693	16 QAM	180	414	
128	43029	QPSK	361	414	
128	43029	16 QAM	180	414	
129	43372	QPSK	361	415	
129	43372	16 QAM	180	415	
130	43708	QPSK	361	415	
130	43708	16 QAM	180	415	
131	44044	QPSK	361	416	
131	44044	16 QAM	180	416	
132	44380	QPSK	361	416	
132	44380	16 QAM	180	416	
133	44716	QPSK	361	417	
133	44716	16 QAM	180	417	
134	45052	QPSK	361	417	
134	45052	16 QAM	180	417	
135	45388	QPSK	361	418	
135	45388	16 QAM	180	418	
136	45724	QPSK	361	418	
136	45724	16 QAM	180	418	
137	46060	QPSK	361	419	
137	46060	16 QAM	180	419	
138	46396	QPSK	361	419	
138	46396	16 QAM	180	419	
139	46732	QPSK	361	419	
139	46732	16 QAM	180	419	
140	47068	QPSK	361	420	
140	47068	16 QAM	180	420	
141	47404	QPSK	361	420	
141	47404	16 QAM	180	420	
142	47740	QPSK	361	421	
142	47740	16 QAM	180	421	
143	48076	QPSK	361	421	
143	48076	16 QAM	180	421	
144	48412	QPSK	361	422	
144	48412	16 QAM	180	422	
145	48748	QPSK	361	422	
145	48748	16 QAM	180	422	
146	49084	QPSK	361	422	
146	49084	16 QAM	180	422	
147	49420	QPSK	361	423	

147	49420	16 QAM	180	423	
148	49756	QPSK	361	423	
148	49756	16 QAM	180	423	
149	50092	QPSK	361	424	
149	50092	16 QAM	180	424	
150	50428	QPSK	361	424	
150	50428	16 QAM	180	424	
151	50764	QPSK	361	425	
151	50764	16 QAM	180	425	
152	51100	QPSK	361	425	
152	51100	16 QAM	180	425	
153	51436	QPSK	361	425	
153	51436	16 QAM	180	425	
154	51772	QPSK	361	426	
154	51772	16 QAM	180	426	
155	52108	QPSK	361	426	
155	52108	16 QAM	180	426	
156	52444	QPSK	361	427	
156	52444	16 QAM	180	427	
157	52780	QPSK	361	427	
157	52780	16 QAM	180	427	
158	53116	QPSK	361	427	
158	53116	16 QAM	180	427	
159	53452	QPSK	361	428	
159	53452	16 QAM	180	428	
160	53788	QPSK	361	428	
160	53788	16 QAM	180	428	
161	54124	QPSK	361	429	
161	54124	16 QAM	180	429	
162	54460	QPSK	361	429	
162	54460	16 QAM	180	429	
163	54796	QPSK	361	429	
163	54796	16 QAM	180	429	
164	55132	QPSK	361	430	
164	55132	16 QAM	180	430	
165	55468	QPSK	361	430	
165	55468	16 QAM	180	430	
166	55804	QPSK	361	431	
166	55804	16 QAM	180	431	
167	56140	QPSK	361	431	
167	56140	16 QAM	180	431	
168	56476	QPSK	361	431	
168	56476	16 QAM	180	431	
169	56812	QPSK	361	432	
169	56812	16 QAM	180	432	
170	57148	QPSK	361	432	
170	57148	16 QAM	180	432	
171	57484	QPSK	361	432	
171	57484	16 QAM	180	432	
172	57820	QPSK	361	433	
172	57820	16 QAM	180	433	
173	58156	QPSK	361	433	
173	58156	16 QAM	180	433	

174	58492	QPSK	361	433	
174	58492	16 QAM	180	433	
175	58828	QPSK	361	434	
175	58828	16 QAM	180	434	
176	59164	QPSK	361	434	
176	59164	16 QAM	180	434	
177	59500	QPSK	361	435	
177	59500	16 QAM	180	435	
178	59836	QPSK	361	435	
178	59836	16 QAM	180	435	
179	60172	QPSK	361	435	
179	60172	16 QAM	180	435	
180	60508	QPSK	361	436	
180	60508	16 QAM	180	436	
181	60844	QPSK	361	436	
181	60844	16 QAM	180	436	
182	61180	QPSK	361	436	
182	61180	16 QAM	180	436	
183	61516	QPSK	361	437	
183	61516	16 QAM	180	437	
184	61852	QPSK	361	437	
184	61852	16 QAM	180	437	
185	62188	QPSK	361	437	
185	62188	16 QAM	180	437	
186	62524	QPSK	361	438	
186	62524	16 QAM	180	438	
187	62860	QPSK	361	438	
187	62860	16 QAM	180	438	
188	63196	QPSK	361	438	
188	63196	16 QAM	180	438	
189	63532	QPSK	361	439	
189	63532	16 QAM	180	439	
190	63868	QPSK	361	439	
190	63868	16 QAM	180	439	
191	64204	QPSK	361	439	
191	64204	16 QAM	180	439	
192	64540	QPSK	361	440	
192	64540	16 QAM	180	440	
193	64876	QPSK	361	440	
193	64876	16 QAM	180	440	
194	65212	QPSK	361	440	
194	65212	16 QAM	180	440	
195	65548	QPSK	361	441	
195	65548	16 QAM	180	441	
196	65884	QPSK	361	441	
196	65884	16 QAM	180	441	
197	66220	QPSK	361	441	
197	66220	16 QAM	180	441	
198	66556	QPSK	361	442	
198	66556	16 QAM	180	442	
199	66892	QPSK	361	442	
199	66892	16 QAM	180	442	
200	67228	QPSK	361	442	

200	67228	16 QAM	180	442	
201	67564	QPSK	361	442	
201	67564	16 QAM	180	442	
202	67900	QPSK	361	443	
202	67900	16 QAM	180	443	
203	68236	QPSK	361	443	
203	68236	16 QAM	180	443	
204	68572	QPSK	361	443	
204	68572	16 QAM	180	443	
205	68908	QPSK	361	444	
205	68908	16 QAM	180	444	
206	69244	QPSK	361	444	
206	69244	16 QAM	180	444	
207	69580	QPSK	361	444	
207	69580	16 QAM	180	444	
208	69916	QPSK	361	445	
208	69916	16 QAM	180	445	
209	70252	QPSK	361	445	
209	70252	16 QAM	180	445	
210	70588	QPSK	361	445	
210	70588	16 QAM	180	445	
211	70924	QPSK	361	445	
211	70924	16 QAM	180	445	
212	71260	QPSK	361	446	
212	71260	16 QAM	180	446	
213	71596	QPSK	361	446	
213	71596	16 QAM	180	446	
214	71932	QPSK	361	446	
214	71932	16 QAM	180	446	
215	72268	QPSK	361	448	
215	72268	16 QAM	180	447	
216	72604	QPSK	361	448	
216	72604	16 QAM	180	447	
217	72940	QPSK	361	448	
217	72940	16 QAM	180	447	

Table 18.3.1.4.3.10: TFRC test points for UE category 11 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	

6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	
25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	120	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	

33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	162	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	168	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	186	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	189	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	208	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	
51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	217	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	217	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	224	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	232	363	
56	18837	16 QAM	116	363	
57	19173	QPSK	232	364	
57	19173	16 QAM	119	364	
58	19509	QPSK	240	365	
58	19509	16 QAM	120	365	
59	19845	QPSK	240	366	

59	19845	16 QAM	120	366	
60	20181	QPSK	248	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	248	368	
61	20517	16 QAM	126	368	
62	20853	QPSK	256	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	256	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	256	371	
64	21525	16 QAM	133	371	
65	21861	QPSK	256	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	256	373	
66	22197	16 QAM	136	373	
67	22533	QPSK	256	374	
67	22533	16 QAM	140	374	
68	22869	QPSK	256	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	256	376	
69	23205	16 QAM	144	376	
70	23541	QPSK	256	377	
70	23541	16 QAM	145	377	
71	23877	QPSK	256	378	
71	23877	16 QAM	147	378	
72	24213	QPSK	256	378	
72	24213	16 QAM	147	378	
73	24549	QPSK	256	379	
73	24549	16 QAM	150	379	
74	24885	QPSK	256	380	
74	24885	16 QAM	154	380	
75	25221	QPSK	256	381	
75	25221	16 QAM	156	381	
76	25557	QPSK	256	382	
76	25557	16 QAM	156	382	
77	25893	QPSK	256	383	
77	25893	16 QAM	161	383	
78	26229	QPSK	256	383	
78	26229	16 QAM	161	383	
79	26565	QPSK	256	384	
79	26565	16 QAM	162	384	
80	26901	QPSK	256	385	
80	26901	16 QAM	162	385	
81	27237	QPSK	256	386	
81	27237	16 QAM	168	386	
82	27573	QPSK	256	386	
82	27573	16 QAM	168	386	
83	27909	QPSK	256	387	
83	27909	16 QAM	168	387	
84	28245	QPSK	256	388	
84	28245	16 QAM	175	388	
85	28581	QPSK	256	389	
85	28581	16 QAM	176	389	

86	28917	QPSK	256	389	
86	28917	16 QAM	176	389	
87	29253	QPSK	256	390	
87	29253	16 QAM	180	390	
88	29589	QPSK	256	391	
88	29589	16 QAM	182	391	
89	29925	QPSK	256	392	
89	29925	16 QAM	186	392	
90	30261	QPSK	256	392	
90	30261	16 QAM	186	392	
91	30597	QPSK	256	393	
91	30597	16 QAM	189	393	
92	30933	QPSK	256	394	
92	30933	16 QAM	192	394	
93	31269	QPSK	256	394	
93	31269	16 QAM	192	394	
94	31605	QPSK	256	395	
94	31605	16 QAM	196	395	
95	31941	QPSK	256	396	
95	31941	16 QAM	196	396	
96	32277	QPSK	256	396	
96	32277	16 QAM	196	396	
97	32613	QPSK	256	397	
97	32613	16 QAM	200	397	
98	32949	QPSK	256	398	
98	32949	16 QAM	203	398	
99	33285	QPSK	256	398	
99	33285	16 QAM	203	398	
100	33621	QPSK	256	399	
100	33621	16 QAM	208	399	
101	33957	QPSK	256	399	
101	33957	16 QAM	208	399	
102	34293	QPSK	256	400	
102	34293	16 QAM	210	400	
103	34629	QPSK	256	401	
103	34629	16 QAM	210	401	
104	34965	QPSK	256	401	
104	34965	16 QAM	210	401	
105	35301	QPSK	256	402	
105	35301	16 QAM	217	402	
106	35637	QPSK	256	403	
106	35637	16 QAM	217	403	
107	35973	QPSK	256	403	
107	35973	16 QAM	217	403	
108	36309	QPSK	256	404	
108	36309	16 QAM	224	404	
109	36645	QPSK	256	404	
109	36645	16 QAM	224	404	
110	36981	QPSK	256	405	
110	36981	16 QAM	224	405	
111	37317	QPSK	256	405	
111	37317	16 QAM	224	405	
112	37653	QPSK	256	406	

112	37653	16 QAM	232	406	
113	37989	QPSK	256	406	
113	37989	16 QAM	232	406	
114	38325	QPSK	256	407	
114	38325	16 QAM	232	407	
115	38661	QPSK	256	408	
115	38661	16 QAM	240	408	
116	38997	QPSK	256	408	
116	38997	16 QAM	240	408	
117	39333	QPSK	256	409	
117	39333	16 QAM	240	409	
118	39669	QPSK	256	409	
118	39669	16 QAM	240	409	
119	40005	QPSK	256	410	
119	40005	16 QAM	248	410	
120	40341	QPSK	256	410	
120	40341	16 QAM	248	410	
121	40677	QPSK	256	411	
121	40677	16 QAM	248	411	
122	41013	QPSK	256	411	
122	41013	16 QAM	248	411	
123	41349	QPSK	256	412	
123	41349	16 QAM	256	412	
124	41685	QPSK	256	412	
124	41685	16 QAM	256	412	
125	42021	QPSK	256	413	
125	42021	16 QAM	256	413	
126	42357	QPSK	256	413	
126	42357	16 QAM	256	413	
127	42693	QPSK	256	414	
127	42693	16 QAM	256	414	
128	43029	QPSK	256	414	
128	43029	16 QAM	256	414	
129	43372	QPSK	256	415	
129	43372	16 QAM	256	415	
130	43708	QPSK	256	415	
130	43708	16 QAM	256	415	
131	44044	QPSK	256	416	
131	44044	16 QAM	256	416	
132	44380	QPSK	256	416	
132	44380	16 QAM	256	416	
133	44716	QPSK	256	417	
133	44716	16 QAM	256	417	
134	45052	QPSK	256	417	
134	45052	16 QAM	256	417	
135	45388	QPSK	256	418	
135	45388	16 QAM	256	418	
136	45724	QPSK	256	418	
136	45724	16 QAM	256	418	
137	46060	QPSK	256	419	
137	46060	16 QAM	256	419	
138	46396	QPSK	256	419	
138	46396	16 QAM	256	419	

139	46732	QPSK	256	419	
139	46732	16 QAM	256	419	
140	47068	QPSK	256	420	
140	47068	16 QAM	256	420	
141	47404	QPSK	256	420	
141	47404	16 QAM	256	420	
142	47740	QPSK	256	423	
142	47740	16 QAM	256	421	
143	48076	QPSK	256	423	
143	48076	16 QAM	256	421	
144	48412	QPSK	256	423	
144	48412	16 QAM	256	422	
145	48748	QPSK	256	423	
145	48748	16 QAM	256	422	
146	49084	QPSK	256	423	
146	49084	16 QAM	256	422	
147	49420	QPSK	256	423	
147	49420	16 QAM	256	423	
148	49756	QPSK	256	423	
148	49756	16 QAM	256	423	
149	50092	QPSK	256	424	
149	50092	16 QAM	256	424	
150	50428	QPSK	256	424	
150	50428	16 QAM	256	424	
151	50764	QPSK	256	425	
151	50764	16 QAM	256	425	
152	51100	QPSK	256	425	
152	51100	16 QAM	256	425	
153	51436	QPSK	256	425	
153	51436	16 QAM	256	425	
154	51772	QPSK	256	427	
154	51772	16 QAM	256	426	
155	52108	QPSK	256	427	
155	52108	16 QAM	256	426	
156	52444	QPSK	256	427	
156	52444	16 QAM	256	427	
157	52780	QPSK	256	427	
157	52780	16 QAM	256	427	
158	53116	QPSK	256	427	
158	53116	16 QAM	256	427	
159	53452	QPSK	256	428	
159	53452	16 QAM	256	428	
160	53788	QPSK	256	428	
160	53788	16 QAM	256	428	
161	54124	QPSK	256	429	
161	54124	16 QAM	256	429	
162	54460	QPSK	256	429	
162	54460	16 QAM	256	429	
163	54796	QPSK	256	429	
163	54796	16 QAM	256	429	
164	55132	QPSK	256	430	
164	55132	16 QAM	256	430	
165	55468	QPSK	256	430	

165	55468	16 QAM	256	430	
166	55804	QPSK	256	431	
166	55804	16 QAM	256	431	
167	56140	QPSK	256	431	
167	56140	16 QAM	256	431	
168	56476	QPSK	256	431	
168	56476	16 QAM	256	431	
169	56812	QPSK	256	432	
169	56812	16 QAM	256	432	
170	57148	QPSK	256	432	
170	57148	16 QAM	256	432	
171	57484	QPSK	256	432	
171	57484	16 QAM	256	432	
172	57820	QPSK	256	433	
172	57820	16 QAM	256	433	
173	58156	QPSK	256	433	
173	58156	16 QAM	256	433	
174	58492	QPSK	256	433	
174	58492	16 QAM	256	433	
175	58828	QPSK	256	434	
175	58828	16 QAM	256	434	
176	59164	QPSK	256	434	
176	59164	16 QAM	256	434	
177	59500	QPSK	256	435	
177	59500	16 QAM	256	435	
178	59836	QPSK	256	435	
178	59836	16 QAM	256	435	
179	60172	QPSK	256	435	
179	60172	16 QAM	256	435	
180	60508	QPSK	256	436	
180	60508	16 QAM	256	436	
181	60844	QPSK	256	436	
181	60844	16 QAM	256	436	
182	61180	QPSK	256	436	
182	61180	16 QAM	256	436	
183	61516	QPSK	256	437	
183	61516	16 QAM	256	437	
184	61852	QPSK	256	437	
184	61852	16 QAM	256	437	
185	62188	QPSK	256	437	
185	62188	16 QAM	256	437	
186	62524	16 QAM	256	438	
187	62860	16 QAM	256	438	
188	63196	16 QAM	256	438	
189	63532	16 QAM	256	439	
190	63868	16 QAM	256	439	
191	64204	16 QAM	256	439	
192	64540	16 QAM	256	440	
193	64876	16 QAM	256	440	
194	65212	16 QAM	256	440	
195	65548	16 QAM	256	441	
196	65884	16 QAM	256	441	
197	66220	16 QAM	256	441	

198	66556	16 QAM	256	442	
199	66892	16 QAM	256	442	
200	67228	16 QAM	256	442	
201	67564	16 QAM	256	442	
202	67900	16 QAM	256	443	
203	68236	16 QAM	256	443	
204	68572	16 QAM	256	443	
205	68908	16 QAM	256	444	
206	69244	16 QAM	256	444	
207	69580	16 QAM	256	444	
208	69916	16 QAM	256	445	
209	70252	16 QAM	256	445	
210	70588	16 QAM	256	445	
211	70924	16 QAM	256	445	
212	71260	16 QAM	256	446	
213	71596	16 QAM	256	446	
214	71932	16 QAM	256	446	
215	72268	16 QAM	256	447	
216	72604	16 QAM	256	447	
217	72940	16 QAM	256	447	
218	73276	16 QAM	256	448	
219	73612	16 QAM	256	448	
220	73948	16 QAM	256	448	
221	74284	16 QAM	256	448	
222	74620	16 QAM	256	449	
223	74956	16 QAM	256	449	
224	75292	16 QAM	256	449	
225	75628	16 QAM	256	449	
226	75964	16 QAM	256	450	
227	76300	16 QAM	256	450	
228	76636	16 QAM	256	450	
229	76972	16 QAM	256	451	
230	77308	16 QAM	256	451	
231	77644	16 QAM	256	451	
232	77980	16 QAM	256	451	
233	78316	16 QAM	256	452	
234	78652	16 QAM	256	452	
235	78988	16 QAM	256	452	
236	79324	16 QAM	256	452	
237	79660	16 QAM	256	453	
238	79996	16 QAM	256	453	
239	80332	16 QAM	256	453	
240	80668	16 QAM	256	454	
241	81004	16 QAM	256	454	
242	81340	16 QAM	256	454	
243	81676	16 QAM	256	454	
244	82012	16 QAM	256	455	
245	82348	16 QAM	256	455	
246	82684	16 QAM	256	455	
247	83020	16 QAM	256	455	
248	83356	16 QAM	256	456	
249	83692	16 QAM	256	456	
250	84028	16 QAM	256	456	

251	84364	16 QAM	256	456	
252	84700	16 QAM	256	457	
253	85036	16 QAM	256	457	
254	85372	16 QAM	256	457	
255	85708	16 QAM	256	457	
256	86044	16 QAM	256	458	
257	86387	16 QAM	256	458	
258	86723	16 QAM	256	458	
259	87059	16 QAM	256	458	
260	87395	16 QAM	256	459	
261	87731	16 QAM	256	459	
262	88067	16 QAM	256	459	
263	88403	16 QAM	256	459	
264	88739	16 QAM	256	459	
265	89075	16 QAM	256	460	
266	89411	16 QAM	256	460	
267	89747	16 QAM	256	460	
268	90083	16 QAM	256	460	
269	90419	16 QAM	256	461	
270	90755	16 QAM	256	461	
271	91091	16 QAM	256	461	
272	91427	16 QAM	256	461	
273	91763	16 QAM	256	462	
274	92099	16 QAM	256	462	
275	92435	16 QAM	256	462	
276	92771	16 QAM	256	462	
277	93107	16 QAM	256	462	
278	93443	16 QAM	256	463	
279	93779	16 QAM	256	463	
280	94115	16 QAM	256	463	
281	94451	16 QAM	256	463	
282	94787	16 QAM	256	464	
283	95123	16 QAM	256	464	
284	95459	16 QAM	256	464	
285	95795	16 QAM	256	464	
286	96131	16 QAM	256	464	
287	96467	16 QAM	256	466	
288	96803	16 QAM	256	466	
289	97139	16 QAM	256	466	
290	97475	16 QAM	256	466	
291	97811	16 QAM	256	466	
292	98147	16 QAM	256	466	
293	98483	16 QAM	256	466	
294	98819	16 QAM	256	466	
295	99155	16 QAM	256	466	
296	99491	16 QAM	256	467	
297	99827	16 QAM	256	467	
298	100163	16 QAM	256	467	
299	100499	16 QAM	256	467	
300	100835	16 QAM	256	467	
301	101171	16 QAM	256	468	
302	101507	16 QAM	256	468	
303	101843	16 QAM	256	468	

304	102179	16 QAM	256	468	
305	102515	16 QAM	256	468	
306	102851	16 QAM	256	469	
307	103187	16 QAM	256	469	
308	103523	16 QAM	256	469	
309	103859	16 QAM	256	469	
310	104195	16 QAM	256	469	
311	104531	16 QAM	256	470	
312	104867	16 QAM	256	470	
313	105203	16 QAM	256	470	
314	105539	16 QAM	256	470	
315	105875	16 QAM	256	470	

Table 18.3.1.4.3.10: TFRC test points for UE category 12 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	
10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	

18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	
25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	
36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	165	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	170	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	

44	14805	16 QAM	92	348	
45	15141	QPSK	187	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	190	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	209	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	
51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	220	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	220	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	231	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	234	363	
56	18837	16 QAM	117	363	
57	19173	QPSK	234	364	
57	19173	16 QAM	119	364	
58	19509	QPSK	242	365	
58	19509	16 QAM	121	365	
59	19845	QPSK	243	366	
59	19845	16 QAM	121	366	
60	20181	QPSK	250	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	253	368	
61	20517	16 QAM	126	368	
62	20853	QPSK	256	369	
62	20853	16 QAM	128	369	
63	21189	QPSK	261	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	264	371	
64	21525	16 QAM	133	371	
65	21861	QPSK	270	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	275	373	
66	22197	16 QAM	136	373	
67	22533	QPSK	280	374	
67	22533	16 QAM	140	374	
68	22869	QPSK	280	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	288	376	
69	23205	16 QAM	144	376	
70	23541	QPSK	290	377	
70	23541	16 QAM	145	377	

71	23877	QPSK	297	378	
71	23877	16 QAM	147	378	
72	24213	QPSK	297	378	
72	24213	16 QAM	147	378	
73	24549	QPSK	300	379	
73	24549	16 QAM	150	379	
74	24885	QPSK	308	380	
74	24885	16 QAM	154	380	
75	25221	QPSK	312	381	
75	25221	16 QAM	156	381	
76	25557	QPSK	312	382	
76	25557	16 QAM	156	382	
77	25893	QPSK	320	383	
77	25893	16 QAM	161	383	
78	26229	QPSK	320	383	
78	26229	16 QAM	161	383	
79	26565	QPSK	324	384	
79	26565	16 QAM	162	384	
80	26901	QPSK	330	385	
80	26901	16 QAM	165	385	
81	27237	QPSK	336	386	
81	27237	16 QAM	168	386	
82	27573	QPSK	336	386	
82	27573	16 QAM	168	386	
83	27909	QPSK	341	387	
83	27909	16 QAM	171	387	
84	28245	QPSK	348	388	
84	28245	16 QAM	175	388	
85	28581	QPSK	352	389	
85	28581	16 QAM	176	389	
86	28917	QPSK	352	389	
86	28917	16 QAM	176	389	
87	29253	QPSK	360	390	
87	29253	16 QAM	180	390	
88	29589	QPSK	360	391	
88	29589	16 QAM	182	391	
89	29925	QPSK	372	392	
89	29925	16 QAM	186	392	
90	30261	QPSK	372	392	
90	30261	16 QAM	186	392	
91	30597	QPSK	372	393	
91	30597	16 QAM	189	393	
92	30933	QPSK	384	394	
92	30933	16 QAM	192	394	
93	31269	QPSK	384	394	
93	31269	16 QAM	192	394	
94	31605	QPSK	384	395	
94	31605	16 QAM	196	395	
95	31941	QPSK	384	396	
95	31941	16 QAM	198	396	
96	32277	QPSK	384	396	
96	32277	16 QAM	198	396	
97	32613	QPSK	384	397	

97	32613	16 QAM	200	397	
98	32949	QPSK	384	398	
98	32949	16 QAM	204	398	
99	33285	QPSK	384	398	
99	33285	16 QAM	204	398	
100	33621	QPSK	384	399	
100	33621	16 QAM	208	399	
101	33957	QPSK	384	399	
101	33957	16 QAM	208	399	
102	34293	QPSK	384	400	
102	34293	16 QAM	210	400	
103	34629	QPSK	384	401	
103	34629	16 QAM	210	401	
104	34965	QPSK	384	401	
104	34965	16 QAM	210	401	
105	35301	QPSK	384	402	
105	35301	16 QAM	217	402	
106	35637	QPSK	384	403	
106	35637	16 QAM	220	403	
107	35973	QPSK	384	403	
107	35973	16 QAM	220	403	
108	36309	QPSK	384	404	
108	36309	16 QAM	225	404	
109	36645	QPSK	384	404	
109	36645	16 QAM	225	404	
110	36981	QPSK	384	405	
110	36981	16 QAM	230	405	
111	37317	QPSK	384	405	
111	37317	16 QAM	230	405	
112	37653	QPSK	384	406	
112	37653	16 QAM	232	406	
113	37989	QPSK	384	406	
113	37989	16 QAM	232	406	
114	38325	QPSK	384	407	
114	38325	16 QAM	234	407	
115	38661	QPSK	384	408	
115	38661	16 QAM	240	408	
116	38997	QPSK	384	408	
116	38997	16 QAM	240	408	
117	39333	QPSK	384	409	
117	39333	16 QAM	243	409	
118	39669	QPSK	384	409	
118	39669	16 QAM	243	409	
119	40005	QPSK	384	410	
119	40005	16 QAM	248	410	
120	40341	QPSK	384	410	
120	40341	16 QAM	248	410	
121	40677	QPSK	384	411	
121	40677	16 QAM	253	411	
122	41013	QPSK	384	411	
122	41013	16 QAM	253	411	
123	41349	QPSK	384	412	
123	41349	16 QAM	256	412	

124	41685	QPSK	384	412	
124	41685	16 QAM	256	412	
125	42021	QPSK	384	413	
125	42021	16 QAM	261	413	
126	42357	QPSK	384	413	
126	42357	16 QAM	261	413	
127	42693	QPSK	384	414	
127	42693	16 QAM	264	414	
128	43029	QPSK	384	414	
128	43029	16 QAM	264	414	
129	43372	QPSK	384	415	
129	43372	16 QAM	270	415	
130	43708	QPSK	384	415	
130	43708	16 QAM	270	415	
131	44044	QPSK	384	416	
131	44044	16 QAM	270	416	
132	44380	QPSK	384	416	
132	44380	16 QAM	270	416	
133	44716	QPSK	384	417	
133	44716	16 QAM	276	417	
134	45052	QPSK	384	417	
134	45052	16 QAM	276	417	
135	45388	QPSK	384	418	
135	45388	16 QAM	280	418	
136	45724	QPSK	384	418	
136	45724	16 QAM	280	418	
137	46060	QPSK	384	419	
137	46060	16 QAM	286	419	
138	46396	QPSK	384	419	
138	46396	16 QAM	286	419	
139	46732	QPSK	384	419	
139	46732	16 QAM	286	419	
140	47068	QPSK	384	420	
140	47068	16 QAM	289	420	
141	47404	QPSK	384	420	
141	47404	16 QAM	289	420	
142	47740	QPSK	384	421	
142	47740	16 QAM	289	421	
143	48076	QPSK	384	421	
143	48076	16 QAM	289	421	
144	48412	QPSK	384	422	
144	48412	16 QAM	289	422	
145	48748	QPSK	384	422	
145	48748	16 QAM	289	422	
146	49084	QPSK	384	422	
146	49084	16 QAM	289	422	
147	49420	QPSK	384	423	
147	49420	16 QAM	289	423	
148	49756	QPSK	384	423	
148	49756	16 QAM	289	423	
149	50092	QPSK	384	424	
149	50092	16 QAM	289	424	
150	50428	QPSK	384	424	

150	50428	16 QAM	289	424	
151	50764	QPSK	384	425	
151	50764	16 QAM	289	425	
152	51100	QPSK	384	425	
152	51100	16 QAM	289	425	
153	51436	QPSK	384	425	
153	51436	16 QAM	289	425	
154	51772	QPSK	384	426	
154	51772	16 QAM	289	426	
155	52108	QPSK	384	426	
155	52108	16 QAM	289	426	
156	52444	QPSK	384	427	
156	52444	16 QAM	289	427	
157	52780	QPSK	384	427	
157	52780	16 QAM	289	427	
158	53116	QPSK	384	427	
158	53116	16 QAM	289	427	
159	53452	QPSK	384	428	
159	53452	16 QAM	289	428	
160	53788	QPSK	384	428	
160	53788	16 QAM	289	428	
161	54124	QPSK	384	429	
161	54124	16 QAM	289	429	
162	54460	QPSK	384	429	
162	54460	16 QAM	289	429	
163	54796	QPSK	384	429	
163	54796	16 QAM	289	429	
164	55132	QPSK	384	430	
164	55132	16 QAM	289	430	
165	55468	QPSK	384	430	
165	55468	16 QAM	289	430	
166	55804	QPSK	384	431	
166	55804	16 QAM	289	431	
167	56140	QPSK	384	431	
167	56140	16 QAM	289	431	
168	56476	QPSK	384	431	
168	56476	16 QAM	289	431	
169	56812	QPSK	384	432	
169	56812	16 QAM	289	432	
170	57148	QPSK	384	432	
170	57148	16 QAM	289	432	
171	57484	QPSK	384	432	
171	57484	16 QAM	289	432	
172	57820	QPSK	384	433	
172	57820	16 QAM	289	433	
173	58156	QPSK	384	433	
173	58156	16 QAM	289	433	
174	58492	QPSK	384	433	
174	58492	16 QAM	289	433	
175	58828	QPSK	384	434	
175	58828	16 QAM	289	434	
176	59164	QPSK	384	434	
176	59164	16 QAM	289	434	

177	59500	QPSK	384	435	
177	59500	16 QAM	289	435	
178	59836	QPSK	384	435	
178	59836	16 QAM	289	435	
179	60172	QPSK	384	435	
179	60172	16 QAM	289	435	
180	60508	QPSK	384	436	
180	60508	16 QAM	289	436	
181	60844	QPSK	384	436	
181	60844	16 QAM	289	436	
182	61180	QPSK	384	436	
182	61180	16 QAM	289	436	
183	61516	QPSK	384	437	
183	61516	16 QAM	289	437	
184	61852	QPSK	384	437	
184	61852	16 QAM	289	437	
185	62188	QPSK	384	437	
185	62188	16 QAM	289	437	
186	62524	QPSK	384	438	
186	62524	16 QAM	289	438	
187	62860	QPSK	384	438	
187	62860	16 QAM	289	438	
188	63196	QPSK	384	438	
188	63196	16 QAM	289	438	
189	63532	QPSK	384	439	
189	63532	16 QAM	289	439	
190	63868	QPSK	384	439	
190	63868	16 QAM	289	439	
191	64204	QPSK	384	439	
191	64204	16 QAM	289	439	
192	64540	QPSK	384	440	
192	64540	16 QAM	289	440	
193	64876	QPSK	384	440	
193	64876	16 QAM	289	440	
194	65212	QPSK	384	440	
194	65212	16 QAM	289	440	
195	65548	QPSK	384	441	
195	65548	16 QAM	289	441	
196	65884	QPSK	384	441	
196	65884	16 QAM	289	441	
197	66220	QPSK	384	441	
197	66220	16 QAM	289	441	
198	66556	QPSK	384	442	
198	66556	16 QAM	289	442	
199	66892	QPSK	384	442	
199	66892	16 QAM	289	442	
200	67228	QPSK	384	442	
200	67228	16 QAM	289	442	
201	67564	QPSK	384	442	
201	67564	16 QAM	289	442	
202	67900	QPSK	384	443	
202	67900	16 QAM	289	443	
203	68236	QPSK	384	443	

203	68236	16 QAM	289	443	
204	68572	QPSK	384	443	
204	68572	16 QAM	289	443	
205	68908	QPSK	384	444	
205	68908	16 QAM	289	444	
206	69244	QPSK	384	444	
206	69244	16 QAM	289	444	
207	69580	QPSK	384	444	
207	69580	16 QAM	289	444	
208	69916	QPSK	384	445	
208	69916	16 QAM	289	445	
209	70252	QPSK	384	445	
209	70252	16 QAM	289	445	
210	70588	QPSK	384	445	
210	70588	16 QAM	289	445	
211	70924	QPSK	384	445	
211	70924	16 QAM	289	445	
212	71260	QPSK	384	446	
212	71260	16 QAM	289	446	
213	71596	QPSK	384	446	
213	71596	16 QAM	289	446	
214	71932	QPSK	384	446	
214	71932	16 QAM	289	446	
215	72268	QPSK	384	448	
215	72268	16 QAM	289	447	
216	72604	QPSK	384	448	
216	72604	16 QAM	289	447	
217	72940	QPSK	384	448	
217	72940	16 QAM	289	447	
218	73276	QPSK	384	448	
218	73276	16 QAM	289	448	
219	73612	QPSK	384	448	
219	73612	16 QAM	289	448	
220	73948	QPSK	384	448	
220	73948	16 QAM	289	448	
221	74284	QPSK	384	448	
221	74284	16 QAM	289	448	
222	74620	QPSK	384	449	
222	74620	16 QAM	289	449	
223	74956	QPSK	384	449	
223	74956	16 QAM	289	449	
224	75292	QPSK	384	449	
224	75292	16 QAM	289	449	
225	75628	QPSK	384	449	
225	75628	16 QAM	289	449	
226	75964	QPSK	384	450	
226	75964	16 QAM	289	450	
227	76300	QPSK	384	450	
227	76300	16 QAM	289	450	
228	76636	QPSK	384	450	
228	76636	16 QAM	289	450	
229	76972	QPSK	384	451	
229	76972	16 QAM	289	451	

230	77308	QPSK	384	451	
230	77308	16 QAM	289	451	
231	77644	QPSK	384	451	
231	77644	16 QAM	289	451	
232	77980	QPSK	384	451	
232	77980	16 QAM	289	451	
233	78316	QPSK	384	452	
233	78316	16 QAM	289	452	
234	78652	QPSK	384	452	
234	78652	16 QAM	289	452	
235	78988	QPSK	384	452	
235	78988	16 QAM	289	452	
236	79324	QPSK	384	452	
236	79324	16 QAM	289	452	
237	79660	QPSK	384	453	
237	79660	16 QAM	289	453	
238	79996	QPSK	384	453	
238	79996	16 QAM	289	453	
239	80332	QPSK	384	453	
239	80332	16 QAM	289	453	
240	80668	QPSK	384	455	
240	80668	16 QAM	289	454	
241	81004	QPSK	384	455	
241	81004	16 QAM	289	454	
242	81340	QPSK	384	455	
242	81340	16 QAM	289	454	
243	81676	QPSK	384	455	
243	81676	16 QAM	289	454	
244	82012	QPSK	384	455	
244	82012	16 QAM	289	455	
245	82348	QPSK	384	455	
245	82348	16 QAM	289	455	
246	82684	QPSK	384	455	
246	82684	16 QAM	289	455	
247	83020	QPSK	384	455	
247	83020	16 QAM	289	455	
248	83356	QPSK	384	456	
248	83356	16 QAM	289	456	
249	83692	QPSK	384	456	
249	83692	16 QAM	289	456	
250	84028	QPSK	384	456	
250	84028	16 QAM	289	456	
251	84364	QPSK	384	456	
251	84364	16 QAM	289	456	
252	84700	QPSK	384	457	
252	84700	16 QAM	289	457	
253	85036	QPSK	384	457	
253	85036	16 QAM	289	457	
254	85372	QPSK	384	457	
254	85372	16 QAM	289	457	
255	85708	QPSK	384	457	
255	85708	16 QAM	289	457	
256	86044	QPSK	384	458	

256	86044	16 QAM	289	458	
257	86387	QPSK	384	458	
257	86387	16 QAM	289	458	
258	86723	QPSK	384	458	
258	86723	16 QAM	289	458	
259	87059	QPSK	384	458	
259	87059	16 QAM	289	458	
260	87395	QPSK	384	459	
260	87395	16 QAM	289	459	
261	87731	QPSK	384	459	
261	87731	16 QAM	289	459	
262	88067	QPSK	384	459	
262	88067	16 QAM	289	459	
263	88403	QPSK	384	459	
263	88403	16 QAM	289	459	
264	88739	QPSK	384	459	
264	88739	16 QAM	289	459	
265	89075	QPSK	384	460	
265	89075	16 QAM	289	460	
266	89411	QPSK	384	460	
266	89411	16 QAM	289	460	
267	89747	QPSK	384	460	
267	89747	16 QAM	289	460	
268	90083	QPSK	384	460	
268	90083	16 QAM	289	460	
269	90419	QPSK	384	461	
269	90419	16 QAM	289	461	
270	90755	QPSK	384	461	
270	90755	16 QAM	289	461	
271	91091	QPSK	384	461	
271	91091	16 QAM	289	461	
272	91427	QPSK	384	461	
272	91427	16 QAM	289	461	
273	91763	QPSK	384	462	
273	91763	16 QAM	289	462	
274	92099	QPSK	384	462	
274	92099	16 QAM	289	462	
275	92435	QPSK	384	462	
275	92435	16 QAM	289	462	
276	92771	QPSK	384	462	
276	92771	16 QAM	289	462	
277	93107	QPSK	384	462	
277	93107	16 QAM	289	462	
278	93443	16 QAM	289	463	
279	93779	16 QAM	289	463	
280	94115	16 QAM	289	463	
281	94451	16 QAM	289	463	
282	94787	16 QAM	289	464	
283	95123	16 QAM	289	464	
284	95459	16 QAM	289	464	
285	95795	16 QAM	289	464	
286	96131	16 QAM	289	464	
287	96467	16 QAM	289	465	

288	96803	16 QAM	289	465	
289	97139	16 QAM	289	465	
290	97475	16 QAM	289	465	
291	97811	16 QAM	289	466	
292	98147	16 QAM	289	466	
293	98483	16 QAM	289	466	
294	98819	16 QAM	289	466	
295	99155	16 QAM	289	466	
296	99491	16 QAM	289	467	
297	99827	16 QAM	289	467	
298	100163	16 QAM	289	467	
299	100499	16 QAM	289	467	
300	100835	16 QAM	289	467	
301	101171	16 QAM	289	468	
302	101507	16 QAM	289	468	
303	101843	16 QAM	289	468	
304	102179	16 QAM	289	468	
305	102515	16 QAM	289	468	
306	102851	16 QAM	289	469	
307	103187	16 QAM	289	469	
308	103523	16 QAM	289	469	
309	103859	16 QAM	289	469	
310	104195	16 QAM	289	469	
311	104531	16 QAM	289	470	
312	104867	16 QAM	289	470	
313	105203	16 QAM	289	470	
314	105539	16 QAM	289	470	
315	105875	16 QAM	289	470	

Table 18.3.1.4.3.10: TFRC test points for UE category 13 for MAC-d PDU size=336, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	357	QPSK	4	115	
1	357	16 QAM	2	115	
2	693	QPSK	8	156	
2	693	16 QAM	4	156	
3	1029	QPSK	12	181	
3	1029	16 QAM	6	181	
4	1365	QPSK	16	199	
4	1365	16 QAM	8	199	
5	1701	QPSK	21	213	
5	1701	16 QAM	10	213	
6	2037	QPSK	25	224	
6	2037	16 QAM	12	224	
7	2373	QPSK	29	233	
7	2373	16 QAM	14	233	
8	2709	QPSK	33	242	
8	2709	16 QAM	16	242	
9	3045	QPSK	36	249	
9	3045	16 QAM	18	249	

10	3381	QPSK	40	255	
10	3381	16 QAM	20	255	
11	3717	QPSK	45	261	
11	3717	16 QAM	22	261	
12	4053	QPSK	50	267	
12	4053	16 QAM	25	267	
13	4389	QPSK	54	272	
13	4389	16 QAM	27	272	
14	4725	QPSK	58	276	
14	4725	16 QAM	29	276	
15	5061	QPSK	63	281	
15	5061	16 QAM	31	281	
16	5397	QPSK	66	285	
16	5397	16 QAM	33	285	
17	5733	QPSK	70	288	
17	5733	16 QAM	35	288	
18	6069	QPSK	75	292	
18	6069	16 QAM	36	292	
19	6405	QPSK	78	295	
19	6405	16 QAM	39	295	
20	6741	QPSK	84	299	
20	6741	16 QAM	42	299	
21	7077	QPSK	88	302	
21	7077	16 QAM	44	302	
22	7413	QPSK	91	304	
22	7413	16 QAM	45	304	
23	7749	QPSK	95	307	
23	7749	16 QAM	46	307	
24	8085	QPSK	100	310	
24	8085	16 QAM	50	310	
25	8421	QPSK	102	312	
25	8421	16 QAM	51	312	
26	8757	QPSK	108	315	
26	8757	16 QAM	54	315	
27	9093	QPSK	112	317	
27	9093	16 QAM	56	317	
28	9429	QPSK	116	319	
28	9429	16 QAM	58	319	
29	9765	QPSK	121	322	
29	9765	16 QAM	60	322	
30	10101	QPSK	125	324	
30	10101	16 QAM	62	324	
31	10437	QPSK	128	326	
31	10437	16 QAM	64	326	
32	10773	QPSK	133	328	
32	10773	16 QAM	66	328	
33	11109	QPSK	138	330	
33	11109	16 QAM	69	330	
34	11445	QPSK	140	332	
34	11445	16 QAM	70	332	
35	11781	QPSK	145	333	
35	11781	16 QAM	72	333	
36	12117	QPSK	147	335	

36	12117	16 QAM	72	335	
37	12453	QPSK	154	337	
37	12453	16 QAM	77	337	
38	12789	QPSK	156	339	
38	12789	16 QAM	78	339	
39	13125	QPSK	162	340	
39	13125	16 QAM	81	340	
40	13461	QPSK	165	342	
40	13461	16 QAM	81	342	
41	13797	QPSK	170	343	
41	13797	16 QAM	85	343	
42	14133	QPSK	176	345	
42	14133	16 QAM	88	345	
43	14469	QPSK	176	346	
43	14469	16 QAM	88	346	
44	14805	QPSK	184	348	
44	14805	16 QAM	92	348	
45	15141	QPSK	187	349	
45	15141	16 QAM	93	349	
46	15477	QPSK	190	350	
46	15477	16 QAM	95	350	
47	15813	QPSK	196	352	
47	15813	16 QAM	98	352	
48	16149	QPSK	200	353	
48	16149	16 QAM	100	353	
49	16485	QPSK	203	354	
49	16485	16 QAM	100	354	
50	16821	QPSK	209	356	
50	16821	16 QAM	104	356	
51	17157	QPSK	210	357	
51	17157	16 QAM	105	357	
52	17493	QPSK	216	358	
52	17493	16 QAM	108	358	
53	17829	QPSK	220	359	
53	17829	16 QAM	110	359	
54	18165	QPSK	220	360	
54	18165	16 QAM	110	360	
55	18501	QPSK	231	362	
55	18501	16 QAM	115	362	
56	18837	QPSK	234	363	
56	18837	16 QAM	117	363	
57	19173	QPSK	234	364	
57	19173	16 QAM	119	364	
58	19509	QPSK	242	365	
58	19509	16 QAM	121	365	
59	19845	QPSK	243	366	
59	19845	16 QAM	121	366	
60	20181	QPSK	250	367	
60	20181	16 QAM	125	367	
61	20517	QPSK	253	368	
61	20517	16 QAM	126	368	
62	20853	QPSK	256	369	
62	20853	16 QAM	128	369	

63	21189	QPSK	261	370	
63	21189	16 QAM	130	370	
64	21525	QPSK	264	371	
64	21525	16 QAM	133	371	
65	21861	QPSK	270	372	
65	21861	16 QAM	135	372	
66	22197	QPSK	275	373	
66	22197	16 QAM	136	373	
67	22533	QPSK	280	374	
67	22533	16 QAM	140	374	
68	22869	QPSK	280	375	
68	22869	16 QAM	140	375	
69	23205	QPSK	288	376	
69	23205	16 QAM	144	376	
70	23541	QPSK	290	377	
70	23541	16 QAM	145	377	
71	23877	QPSK	297	378	
71	23877	16 QAM	147	378	
72	24213	QPSK	297	378	
72	24213	16 QAM	147	378	
73	24549	QPSK	300	379	
73	24549	16 QAM	150	379	
74	24885	QPSK	308	380	
74	24885	16 QAM	154	380	
75	25221	QPSK	312	381	
75	25221	16 QAM	156	381	
76	25557	QPSK	312	382	
76	25557	16 QAM	156	382	
77	25893	QPSK	320	383	
77	25893	16 QAM	161	383	
78	26229	QPSK	320	383	
78	26229	16 QAM	161	383	
79	26565	QPSK	324	384	
79	26565	16 QAM	162	384	
80	26901	QPSK	330	385	
80	26901	16 QAM	165	385	
81	27237	QPSK	336	386	
81	27237	16 QAM	168	386	
82	27573	QPSK	336	386	
82	27573	16 QAM	168	386	
83	27909	QPSK	341	387	
83	27909	16 QAM	171	387	
84	28245	QPSK	348	388	
84	28245	16 QAM	175	388	
85	28581	QPSK	352	389	
85	28581	16 QAM	176	389	
86	28917	QPSK	352	389	
86	28917	16 QAM	176	389	
87	29253	QPSK	360	390	
87	29253	16 QAM	180	390	
88	29589	QPSK	360	391	
88	29589	16 QAM	182	391	
89	29925	QPSK	372	392	

89	29925	16 QAM	186	392	
90	30261	QPSK	372	392	
90	30261	16 QAM	186	392	
91	30597	QPSK	372	393	
91	30597	16 QAM	189	393	
92	30933	QPSK	384	394	
92	30933	16 QAM	192	394	
93	31269	QPSK	384	394	
93	31269	16 QAM	192	394	
94	31605	QPSK	384	395	
94	31605	16 QAM	196	395	
95	31941	QPSK	384	396	
95	31941	16 QAM	198	396	
96	32277	QPSK	384	396	
96	32277	16 QAM	198	396	
97	32613	QPSK	384	397	
97	32613	16 QAM	200	397	
98	32949	QPSK	384	398	
98	32949	16 QAM	204	398	
99	33285	QPSK	384	398	
99	33285	16 QAM	204	398	
100	33621	QPSK	384	399	
100	33621	16 QAM	208	399	
101	33957	QPSK	384	399	
101	33957	16 QAM	208	399	
102	34293	QPSK	384	400	
102	34293	16 QAM	210	400	
103	34629	QPSK	384	401	
103	34629	16 QAM	210	401	
104	34965	QPSK	384	401	
104	34965	16 QAM	210	401	
105	35301	QPSK	384	402	
105	35301	16 QAM	217	402	
106	35637	QPSK	384	403	
106	35637	16 QAM	220	403	
107	35973	QPSK	384	403	
107	35973	16 QAM	220	403	
108	36309	QPSK	384	404	
108	36309	16 QAM	225	404	
109	36645	QPSK	384	404	
109	36645	16 QAM	225	404	
110	36981	QPSK	384	405	
110	36981	16 QAM	230	405	
111	37317	QPSK	384	405	
111	37317	16 QAM	230	405	
112	37653	QPSK	384	406	
112	37653	16 QAM	232	406	
113	37989	QPSK	384	406	
113	37989	16 QAM	232	406	
114	38325	QPSK	384	407	
114	38325	16 QAM	234	407	
115	38661	QPSK	384	408	
115	38661	16 QAM	240	408	

116	38997	QPSK	384	408	
116	38997	16 QAM	240	408	
117	39333	QPSK	384	409	
117	39333	16 QAM	243	409	
118	39669	QPSK	384	409	
118	39669	16 QAM	243	409	
119	40005	QPSK	384	410	
119	40005	16 QAM	248	410	
120	40341	QPSK	384	410	
120	40341	16 QAM	248	410	
121	40677	QPSK	384	411	
121	40677	16 QAM	253	411	
122	41013	QPSK	384	411	
122	41013	16 QAM	253	411	
123	41349	QPSK	384	412	
123	41349	16 QAM	256	412	
124	41685	QPSK	384	412	
124	41685	16 QAM	256	412	
125	42021	QPSK	384	413	
125	42021	16 QAM	261	413	
126	42357	QPSK	384	413	
126	42357	16 QAM	261	413	
127	42693	QPSK	384	414	
127	42693	16 QAM	264	414	
128	43029	QPSK	384	414	
128	43029	16 QAM	264	414	
129	43372	QPSK	384	415	
129	43372	16 QAM	270	415	
130	43708	QPSK	384	415	
130	43708	16 QAM	270	415	
131	44044	QPSK	384	416	
131	44044	16 QAM	270	416	
132	44380	QPSK	384	416	
132	44380	16 QAM	270	416	
133	44716	QPSK	384	417	
133	44716	16 QAM	276	417	
134	45052	QPSK	384	417	
134	45052	16 QAM	276	417	
135	45388	QPSK	384	418	
135	45388	16 QAM	280	418	
136	45724	QPSK	384	418	
136	45724	16 QAM	280	418	
137	46060	QPSK	384	419	
137	46060	16 QAM	286	419	
138	46396	QPSK	384	419	
138	46396	16 QAM	286	419	
139	46732	QPSK	384	419	
139	46732	16 QAM	286	419	
140	47068	QPSK	384	420	
140	47068	16 QAM	290	420	
141	47404	QPSK	384	420	
141	47404	16 QAM	290	420	
142	47740	QPSK	384	421	

142	47740	16 QAM	297	421	
143	48076	QPSK	384	421	
143	48076	16 QAM	297	421	
144	48412	QPSK	384	422	
144	48412	16 QAM	300	422	
145	48748	QPSK	384	422	
145	48748	16 QAM	300	422	
146	49084	QPSK	384	422	
146	49084	16 QAM	300	422	
147	49420	QPSK	384	423	
147	49420	16 QAM	300	423	
148	49756	QPSK	384	423	
148	49756	16 QAM	300	423	
149	50092	QPSK	384	424	
149	50092	16 QAM	310	424	
150	50428	QPSK	384	424	
150	50428	16 QAM	310	424	
151	50764	QPSK	384	425	
151	50764	16 QAM	312	425	
152	51100	QPSK	384	425	
152	51100	16 QAM	312	425	
153	51436	QPSK	384	425	
153	51436	16 QAM	312	425	
154	51772	QPSK	384	426	
154	51772	16 QAM	320	426	
155	52108	QPSK	384	426	
155	52108	16 QAM	320	426	
156	52444	QPSK	384	427	
156	52444	16 QAM	324	427	
157	52780	QPSK	384	427	
157	52780	16 QAM	324	427	
158	53116	QPSK	384	427	
158	53116	16 QAM	324	427	
159	53452	QPSK	384	428	
159	53452	16 QAM	330	428	
160	53788	QPSK	384	428	
160	53788	16 QAM	330	428	
161	54124	QPSK	384	429	
161	54124	16 QAM	336	429	
162	54460	QPSK	384	429	
162	54460	16 QAM	336	429	
163	54796	QPSK	384	429	
163	54796	16 QAM	336	429	
164	55132	QPSK	384	430	
164	55132	16 QAM	341	430	
165	55468	QPSK	384	430	
165	55468	16 QAM	341	430	
166	55804	QPSK	384	431	
166	55804	16 QAM	348	431	
167	56140	QPSK	384	431	
167	56140	16 QAM	348	431	
168	56476	QPSK	384	431	
168	56476	16 QAM	348	431	

169	56812	QPSK	384	432	
169	56812	16 QAM	352	432	
170	57148	QPSK	384	432	
170	57148	16 QAM	352	432	
171	57484	QPSK	384	432	
171	57484	16 QAM	352	432	
172	57820	QPSK	384	433	
172	57820	16 QAM	360	433	
173	58156	QPSK	384	433	
173	58156	16 QAM	360	433	
174	58492	QPSK	384	433	
174	58492	16 QAM	360	433	
175	58828	QPSK	384	434	
175	58828	16 QAM	360	434	
176	59164	QPSK	384	434	
176	59164	16 QAM	360	434	
177	59500	QPSK	384	435	
177	59500	16 QAM	360	435	
178	59836	QPSK	384	435	
178	59836	16 QAM	360	435	
179	60172	QPSK	384	435	
179	60172	16 QAM	360	435	
180	60508	QPSK	384	436	
180	60508	16 QAM	372	436	
181	60844	QPSK	384	436	
181	60844	16 QAM	372	436	
182	61180	QPSK	384	436	
182	61180	16 QAM	372	436	
183	61516	QPSK	384	437	
183	61516	16 QAM	384	437	
184	61852	QPSK	384	437	
184	61852	16 QAM	384	437	
185	62188	QPSK	384	437	
185	62188	16 QAM	384	437	
186	62524	QPSK	384	438	
186	62524	16 QAM	384	438	
187	62860	QPSK	384	438	
187	62860	16 QAM	384	438	
188	63196	QPSK	384	438	
188	63196	16 QAM	384	438	
189	63532	QPSK	384	439	
189	63532	16 QAM	384	439	
190	63868	QPSK	384	439	
190	63868	16 QAM	384	439	
191	64204	QPSK	384	439	
191	64204	16 QAM	384	439	
192	64540	QPSK	384	440	
192	64540	16 QAM	384	440	
193	64876	QPSK	384	440	
193	64876	16 QAM	384	440	
194	65212	QPSK	384	440	
194	65212	16 QAM	384	440	
195	65548	QPSK	384	441	

195	65548	16 QAM	384	441	
196	65884	QPSK	384	441	
196	65884	16 QAM	384	441	
197	66220	QPSK	384	441	
197	66220	16 QAM	384	441	
198	66556	QPSK	384	442	
198	66556	16 QAM	384	442	
199	66892	QPSK	384	442	
199	66892	16 QAM	384	442	
200	67228	QPSK	384	442	
200	67228	16 QAM	384	442	
201	67564	QPSK	384	442	
201	67564	16 QAM	384	442	
202	67900	QPSK	384	443	
202	67900	16 QAM	384	443	
203	68236	QPSK	384	443	
203	68236	16 QAM	384	443	
204	68572	QPSK	384	443	
204	68572	16 QAM	384	443	
205	68908	QPSK	384	444	
205	68908	16 QAM	384	444	
206	69244	QPSK	384	444	
206	69244	16 QAM	384	444	
207	69580	QPSK	384	444	
207	69580	16 QAM	384	444	
208	69916	QPSK	384	445	
208	69916	16 QAM	384	445	
209	70252	QPSK	384	445	
209	70252	16 QAM	384	445	
210	70588	QPSK	384	445	
210	70588	16 QAM	384	445	
211	70924	QPSK	384	445	
211	70924	16 QAM	384	445	
212	71260	QPSK	384	446	
212	71260	16 QAM	384	446	
213	71596	QPSK	384	446	
213	71596	16 QAM	384	446	
214	71932	QPSK	384	446	
214	71932	16 QAM	384	446	
215	72268	QPSK	384	448	
215	72268	16 QAM	384	447	
216	72604	QPSK	384	448	
216	72604	16 QAM	384	447	
217	72940	QPSK	384	448	
217	72940	16 QAM	384	447	
218	73276	QPSK	384	448	
218	73276	16 QAM	384	448	
219	73612	QPSK	384	448	
219	73612	16 QAM	384	448	
220	73948	QPSK	384	448	
220	73948	16 QAM	384	448	
221	74284	QPSK	384	448	
221	74284	16 QAM	384	448	

222	74620	QPSK	384	449	
222	74620	16 QAM	384	449	
223	74956	QPSK	384	449	
223	74956	16 QAM	384	449	
224	75292	QPSK	384	449	
224	75292	16 QAM	384	449	
225	75628	QPSK	384	449	
225	75628	16 QAM	384	449	
226	75964	QPSK	384	450	
226	75964	16 QAM	384	450	
227	76300	QPSK	384	450	
227	76300	16 QAM	384	450	
228	76636	QPSK	384	450	
228	76636	16 QAM	384	450	
229	76972	QPSK	384	451	
229	76972	16 QAM	384	451	
230	77308	QPSK	384	451	
230	77308	16 QAM	384	451	
231	77644	QPSK	384	451	
231	77644	16 QAM	384	451	
232	77980	QPSK	384	451	
232	77980	16 QAM	384	451	
233	78316	QPSK	384	452	
233	78316	16 QAM	384	452	
234	78652	QPSK	384	452	
234	78652	16 QAM	384	452	
235	78988	QPSK	384	452	
235	78988	16 QAM	384	452	
236	79324	QPSK	384	452	
236	79324	16 QAM	384	452	
237	79660	QPSK	384	453	
237	79660	16 QAM	384	453	
238	79996	QPSK	384	453	
238	79996	16 QAM	384	453	
239	80332	QPSK	384	453	
239	80332	16 QAM	384	453	
240	80668	QPSK	384	455	
240	80668	16 QAM	384	454	
241	81004	QPSK	384	455	
241	81004	16 QAM	384	454	
242	81340	QPSK	384	455	
242	81340	16 QAM	384	454	
243	81676	QPSK	384	455	
243	81676	16 QAM	384	454	
244	82012	QPSK	384	455	
244	82012	16 QAM	384	455	
245	82348	QPSK	384	455	
245	82348	16 QAM	384	455	
246	82684	QPSK	384	455	
246	82684	16 QAM	384	455	
247	83020	QPSK	384	455	
247	83020	16 QAM	384	455	
248	83356	QPSK	384	456	

248	83356	16 QAM	384	456	
249	83692	QPSK	384	456	
249	83692	16 QAM	384	456	
250	84028	QPSK	384	456	
250	84028	16 QAM	384	456	
251	84364	QPSK	384	456	
251	84364	16 QAM	384	456	
252	84700	QPSK	384	457	
252	84700	16 QAM	384	457	
253	85036	QPSK	384	457	
253	85036	16 QAM	384	457	
254	85372	QPSK	384	457	
254	85372	16 QAM	384	457	
255	85708	QPSK	384	457	
255	85708	16 QAM	384	457	
256	86044	QPSK	384	458	
256	86044	16 QAM	384	458	
257	86387	QPSK	384	458	
257	86387	16 QAM	384	458	
258	86723	QPSK	384	458	
258	86723	16 QAM	384	458	
259	87059	QPSK	384	458	
259	87059	16 QAM	384	458	
260	87395	QPSK	384	459	
260	87395	16 QAM	384	459	
261	87731	QPSK	384	459	
261	87731	16 QAM	384	459	
262	88067	QPSK	384	459	
262	88067	16 QAM	384	459	
263	88403	QPSK	384	459	
263	88403	16 QAM	384	459	
264	88739	QPSK	384	459	
264	88739	16 QAM	384	459	
265	89075	QPSK	384	460	
265	89075	16 QAM	384	460	
266	89411	QPSK	384	460	
266	89411	16 QAM	384	460	
267	89747	QPSK	384	460	
267	89747	16 QAM	384	460	
268	90083	QPSK	384	460	
268	90083	16 QAM	384	460	
269	90419	QPSK	384	461	
269	90419	16 QAM	384	461	
270	90755	QPSK	384	461	
270	90755	16 QAM	384	461	
271	91091	QPSK	384	461	
271	91091	16 QAM	384	461	
272	91427	QPSK	384	461	
272	91427	16 QAM	384	461	
273	91763	QPSK	384	462	
273	91763	16 QAM	384	462	
274	92099	QPSK	384	462	
274	92099	16 QAM	384	462	

275	92435	QPSK	384	462	
275	92435	16 QAM	384	462	
276	92771	QPSK	384	462	
276	92771	16 QAM	384	462	
277	93107	QPSK	384	462	
277	93107	16 QAM	384	462	
278	93443	16 QAM	384	463	
279	93779	16 QAM	384	463	
280	94115	16 QAM	384	463	
281	94451	16 QAM	384	463	
282	94787	16 QAM	384	464	
283	95123	16 QAM	384	464	
284	95459	16 QAM	384	464	
285	95795	16 QAM	384	464	
286	96131	16 QAM	384	464	
287	96467	16 QAM	384	465	
288	96803	16 QAM	384	465	
289	97139	16 QAM	384	465	
290	97475	16 QAM	384	465	
291	97811	16 QAM	384	466	
292	98147	16 QAM	384	466	
293	98483	16 QAM	384	466	
294	98819	16 QAM	384	466	
295	99155	16 QAM	384	466	
296	99491	16 QAM	384	467	
297	99827	16 QAM	384	467	
298	100163	16 QAM	384	467	
299	100499	16 QAM	384	467	
300	100835	16 QAM	384	467	
301	101171	16 QAM	384	468	
302	101507	16 QAM	384	468	
303	101843	16 QAM	384	468	
304	102179	16 QAM	384	468	
305	102515	16 QAM	384	468	
306	102851	16 QAM	384	469	
307	103187	16 QAM	384	469	
308	103523	16 QAM	384	469	
309	103859	16 QAM	384	469	
310	104195	16 QAM	384	469	
311	104531	16 QAM	384	470	
312	104867	16 QAM	384	470	
313	105203	16 QAM	384	470	
314	105539	16 QAM	384	470	
315	105875	16 QAM	384	470	
316	106211	16 QAM	384	471	
317	106547	16 QAM	384	471	
318	106883	16 QAM	384	471	
319	107219	16 QAM	384	471	
320	107555	16 QAM	384	471	
321	107891	16 QAM	384	472	
322	108227	16 QAM	384	472	
323	108563	16 QAM	384	472	
324	108899	16 QAM	384	472	

325	109235	16 QAM	384	472	
326	109571	16 QAM	384	473	
327	109907	16 QAM	384	473	
328	110243	16 QAM	384	473	
329	110579	16 QAM	384	473	
330	110915	16 QAM	384	473	
331	111251	16 QAM	384	474	
332	111587	16 QAM	384	474	
333	111923	16 QAM	384	474	
334	112259	16 QAM	384	474	
335	112595	16 QAM	384	474	
336	112931	16 QAM	384	475	
337	113267	16 QAM	384	475	
338	113603	16 QAM	384	475	
339	113939	16 QAM	384	475	
340	114275	16 QAM	384	475	
341	114611	16 QAM	384	475	
342	114947	16 QAM	384	476	
343	115283	16 QAM	384	476	
344	115619	16 QAM	384	476	
345	115955	16 QAM	384	476	
346	116291	16 QAM	384	476	
347	116627	16 QAM	384	477	
348	116963	16 QAM	384	477	
349	117299	16 QAM	384	477	
350	117635	16 QAM	384	477	
351	117971	16 QAM	384	477	
352	118307	16 QAM	384	477	
353	118643	16 QAM	384	478	
354	118979	16 QAM	384	478	
355	119315	16 QAM	384	478	
356	119651	16 QAM	384	478	
357	119987	16 QAM	384	478	
358	120323	16 QAM	384	478	
359	120659	16 QAM	384	479	
360	120995	16 QAM	384	479	
361	121331	16 QAM	384	479	
362	121667	16 QAM	384	479	
363	122003	16 QAM	384	479	
364	122339	16 QAM	384	480	
365	122675	16 QAM	384	480	
366	123011	16 QAM	384	480	
367	123347	16 QAM	384	480	
368	123683	16 QAM	384	480	
369	124019	16 QAM	384	480	
370	124355	16 QAM	384	481	
371	124691	16 QAM	384	481	
372	125027	16 QAM	384	481	
373	125363	16 QAM	384	481	
374	125699	16 QAM	384	481	
375	126035	16 QAM	384	481	
376	126371	16 QAM	384	482	
377	126707	16 QAM	384	482	

378	127043	16 QAM	384	482	
379	127379	16 QAM	384	482	
380	127715	16 QAM	384	482	
381	128051	16 QAM	384	482	
382	128387	16 QAM	384	483	
383	128723	16 QAM	384	483	
384	129059	16 QAM	384	483	
385	129402	16 QAM	384	483	
386	129738	16 QAM	384	483	
387	130074	16 QAM	384	483	
388	130410	16 QAM	384	484	
389	130746	16 QAM	384	484	
390	131082	16 QAM	384	484	
391	131418	16 QAM	384	484	
392	131754	16 QAM	384	484	
393	132090	16 QAM	384	484	
394	132426	16 QAM	384	484	
395	132762	16 QAM	384	485	
396	133098	16 QAM	384	485	
397	133434	16 QAM	384	485	
398	133770	16 QAM	384	485	
399	134106	16 QAM	384	485	
400	134442	16 QAM	384	485	
401	134778	16 QAM	384	486	
402	135114	16 QAM	384	486	
403	135450	16 QAM	384	486	
404	135786	16 QAM	384	486	
405	136122	16 QAM	384	486	
406	136458	16 QAM	384	486	
407	136794	16 QAM	384	486	
408	137130	16 QAM	384	487	
409	137466	16 QAM	384	487	
410	137802	16 QAM	384	487	
411	138138	16 QAM	384	487	
412	138474	16 QAM	384	487	
413	138810	16 QAM	384	487	
414	139146	16 QAM	384	488	
415	139482	16 QAM	384	488	
416	139818	16 QAM	384	488	
417	140154	16 QAM	384	488	
418	140490	16 QAM	384	488	
419	140826	16 QAM	384	488	
420	141162	16 QAM	384	488	
421	141498	16 QAM	384	489	
422	141834	16 QAM	384	489	
423	142170	16 QAM	384	489	
424	142506	16 QAM	384	489	
425	142842	16 QAM	384	489	
426	143178	16 QAM	384	489	
427	143514	16 QAM	384	489	
428	143850	16 QAM	384	491	
429	144186	16 QAM	384	491	
430	144522	16 QAM	384	491	

431	144858	16 QAM	384	491	
432	145194	16 QAM	384	491	
433	145530	16 QAM	384	491	
434	145866	16 QAM	384	491	
435	146202	16 QAM	384	491	
436	146538	16 QAM	384	491	
437	146874	16 QAM	384	491	
438	147210	16 QAM	384	491	
439	147546	16 QAM	384	491	
440	147882	16 QAM	384	491	
441	148218	16 QAM	384	492	
442	148554	16 QAM	384	492	
443	148890	16 QAM	384	492	
444	149226	16 QAM	384	492	
445	149562	16 QAM	384	492	
446	149898	16 QAM	384	492	
447	150234	16 QAM	384	492	
448	150570	16 QAM	384	492	
449	150906	16 QAM	384	493	
450	151242	16 QAM	384	493	
451	151578	16 QAM	384	493	
452	151914	16 QAM	384	493	
453	152250	16 QAM	384	493	
454	152586	16 QAM	384	493	
455	152922	16 QAM	384	493	
456	153258	16 QAM	384	494	
457	153594	16 QAM	384	494	
458	153930	16 QAM	384	494	
459	154266	16 QAM	384	494	
460	154602	16 QAM	384	494	
461	154938	16 QAM	384	494	
462	155274	16 QAM	384	494	
463	155610	16 QAM	384	495	
464	155946	16 QAM	384	495	
465	156282	16 QAM	384	495	
466	156618	16 QAM	384	495	
467	156954	16 QAM	384	495	
468	157290	16 QAM	384	495	
469	157626	16 QAM	384	495	
470	157962	16 QAM	384	495	
471	158298	16 QAM	384	496	
472	158634	16 QAM	384	496	
473	158970	16 QAM	384	496	
474	159306	16 QAM	384	496	
475	159642	16 QAM	384	496	
476	159978	16 QAM	384	496	
477	160314	16 QAM	384	496	
478	160650	16 QAM	384	497	
479	160986	16 QAM	384	497	
480	161322	16 QAM	384	497	
481	161658	16 QAM	384	497	
482	161994	16 QAM	384	497	
483	162330	16 QAM	384	497	

484	162666	16 QAM	384	497	
485	163002	16 QAM	384	497	
486	163338	16 QAM	384	498	
487	163674	16 QAM	384	498	
488	164010	16 QAM	384	498	
489	164346	16 QAM	384	498	
490	164682	16 QAM	384	498	
491	165018	16 QAM	384	498	
492	165354	16 QAM	384	498	
493	165690	16 QAM	384	498	
494	166026	16 QAM	384	499	
495	166362	16 QAM	384	499	
496	166698	16 QAM	384	499	
497	167034	16 QAM	384	499	
498	167370	16 QAM	384	499	
499	167706	16 QAM	384	499	
500	168042	16 QAM	384	499	
501	168378	16 QAM	384	499	
502	168714	16 QAM	384	501	
503	169050	16 QAM	384	501	
504	169386	16 QAM	384	501	
505	169722	16 QAM	384	501	
506	170058	16 QAM	384	501	
507	170394	16 QAM	384	501	
508	170730	16 QAM	384	501	
509	171066	16 QAM	384	501	
510	171402	16 QAM	384	501	
511	171738	16 QAM	384	501	
512	172074	16 QAM	384	501	
513	172417	16 QAM	384	501	
514	172753	16 QAM	384	501	
515	173089	16 QAM	384	501	
516	173425	16 QAM	384	501	
517	173761	16 QAM	384	501	
518	174097	16 QAM	384	502	
519	174433	16 QAM	384	502	
520	174769	16 QAM	384	502	
521	175105	16 QAM	384	502	
522	175441	16 QAM	384	502	
523	175777	16 QAM	384	502	
524	176113	16 QAM	384	502	
525	176449	16 QAM	384	502	
526	176785	16 QAM	384	503	
527	177121	16 QAM	384	503	
528	177457	16 QAM	384	503	
529	177793	16 QAM	384	503	
530	178129	16 QAM	384	503	
531	178465	16 QAM	384	503	
532	178801	16 QAM	384	503	
533	179137	16 QAM	384	503	
534	179473	16 QAM	384	503	
535	179809	16 QAM	384	504	
536	180145	16 QAM	384	504	

537	180481	16 QAM	384	504	
538	180817	16 QAM	384	504	
539	181153	16 QAM	384	504	
540	181489	16 QAM	384	504	
541	181825	16 QAM	384	504	
542	182161	16 QAM	384	504	
543	182497	16 QAM	384	504	
544	182833	16 QAM	384	505	
545	183169	16 QAM	384	505	
546	183505	16 QAM	384	505	
547	183841	16 QAM	384	505	
548	184177	16 QAM	384	505	
549	184513	16 QAM	384	505	
550	184849	16 QAM	384	505	
551	185185	16 QAM	384	505	

18.3.1.4.4 TFRC test points for MAC-d PDU size=656

Table 18.3.1.4.4.1: TFRC test points for UE category 1 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	32	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	32	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	32	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	32	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	32	290	
9	5925	16 QAM	32	290	
10	6581	QPSK	32	297	
10	6581	16 QAM	32	297	
11	7237	QPSK	32	303	
11	7237	16 QAM	32	303	
12	7893	16 QAM	32	308	
13	8549	16 QAM	32	313	
14	9205	16 QAM	32	318	
15	9861	16 QAM	32	322	
16	10517	16 QAM	32	326	
17	11173	16 QAM	32	330	
18	11829	16 QAM	32	334	

Table 18.3.1.4.4.2: TFRC test points for UE category 2 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	72	297	
10	6581	16 QAM	36	297	
11	7237	QPSK	72	303	
11	7237	16 QAM	36	303	
12	7893	QPSK	72	308	
12	7893	16 QAM	36	308	
13	8549	QPSK	72	313	
13	8549	16 QAM	36	313	
14	9205	QPSK	72	318	
14	9205	16 QAM	36	318	
15	9861	QPSK	72	322	
15	9861	16 QAM	36	322	
16	10517	QPSK	72	326	
16	10517	16 QAM	36	326	
17	11173	QPSK	72	330	
17	11173	16 QAM	36	330	
18	11829	QPSK	72	334	
18	11829	16 QAM	36	334	

Table 18.3.1.4.4.3: TFRC test points for UE category 3 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	56	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	64	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	64	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	64	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	64	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	64	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	64	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	64	318	
14	9205	16 QAM	56	318	
15	9861	QPSK	64	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	64	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	64	330	
17	11173	16 QAM	64	330	
18	11829	QPSK	64	334	
18	11829	16 QAM	64	334	
19	12485	QPSK	64	337	
19	12485	16 QAM	64	337	
20	13141	QPSK	64	340	
20	13141	16 QAM	64	340	
21	13797	QPSK	64	343	
21	13797	16 QAM	64	343	
22	14453	QPSK	64	346	
22	14453	16 QAM	64	346	
23	15109	QPSK	64	349	
23	15109	16 QAM	64	349	
24	15765	16 QAM	64	352	
25	16421	16 QAM	64	354	

26	17077	16 QAM	64	357	
27	17733	16 QAM	64	359	
28	18389	16 QAM	64	361	
29	19045	16 QAM	64	363	
30	19701	16 QAM	64	365	
31	20357	16 QAM	64	368	
32	21013	16 QAM	64	370	
33	21669	16 QAM	64	371	
34	22325	16 QAM	64	373	
35	22981	16 QAM	64	375	
36	23637	16 QAM	64	377	

Table 18.3.1.4.4.4: TFRC test points for UE category 4 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	144	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	144	337	
19	12485	16 QAM	72	337	
20	13141	QPSK	144	340	
20	13141	16 QAM	72	340	
21	13797	QPSK	144	343	
21	13797	16 QAM	72	343	
22	14453	QPSK	144	346	
22	14453	16 QAM	72	346	
23	15109	QPSK	144	349	
23	15109	16 QAM	72	349	
24	15765	QPSK	144	352	
24	15765	16 QAM	72	352	

25	16421	QPSK	144	354	
25	16421	16 QAM	72	354	
26	17077	QPSK	144	357	
26	17077	16 QAM	72	357	
27	17733	QPSK	144	359	
27	17733	16 QAM	72	359	
28	18389	QPSK	144	361	
28	18389	16 QAM	72	361	
29	19045	QPSK	144	363	
29	19045	16 QAM	72	363	
30	19701	QPSK	144	365	
30	19701	16 QAM	72	365	
31	20357	QPSK	144	368	
31	20357	16 QAM	72	368	
32	21013	QPSK	144	370	
32	21013	16 QAM	72	370	
33	21669	QPSK	144	371	
33	21669	16 QAM	72	371	
34	22325	QPSK	144	373	
34	22325	16 QAM	72	373	
35	22981	QPSK	144	375	
35	22981	16 QAM	72	375	
36	23637	QPSK	144	377	
36	23637	16 QAM	72	377	

Table 18.3.1.4.4.5: TFRC test points for UE category 5 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	64	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	87	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	96	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	96	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	96	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	96	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	96	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	96	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	96	337	
19	12485	16 QAM	75	337	
20	13141	QPSK	96	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	96	343	
21	13797	16 QAM	84	343	
22	14453	QPSK	96	346	
22	14453	16 QAM	87	346	
23	15109	QPSK	96	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	96	352	
24	15765	16 QAM	96	352	

25	16421	QPSK	96	354	
25	16421	16 QAM	96	354	
26	17077	QPSK	96	357	
26	17077	16 QAM	96	357	
27	17733	QPSK	96	359	
27	17733	16 QAM	96	359	
28	18389	QPSK	96	362	
28	18389	16 QAM	96	361	
29	19045	QPSK	96	363	
29	19045	16 QAM	96	363	
30	19701	QPSK	96	365	
30	19701	16 QAM	96	365	
31	20357	QPSK	96	368	
31	20357	16 QAM	96	368	
32	21013	QPSK	96	371	
32	21013	16 QAM	96	370	
33	21669	QPSK	96	371	
33	21669	16 QAM	96	371	
34	22325	QPSK	96	373	
34	22325	16 QAM	96	373	
35	22981	QPSK	96	375	
35	22981	16 QAM	96	375	
36	23637	16 QAM	96	377	
37	24293	16 QAM	96	379	
38	24949	16 QAM	96	380	
39	25605	16 QAM	96	382	
40	26261	16 QAM	96	383	
41	26917	16 QAM	96	385	
42	27573	16 QAM	96	386	
43	28229	16 QAM	96	388	
44	28885	16 QAM	96	389	
45	29541	16 QAM	96	391	
46	30197	16 QAM	96	392	
47	30853	16 QAM	96	394	
48	31509	16 QAM	96	395	
49	32165	16 QAM	96	396	
50	32821	16 QAM	96	397	
51	33477	16 QAM	96	399	
52	34133	16 QAM	96	400	
53	34789	16 QAM	96	401	
54	35445	16 QAM	96	402	

Table 18.3.1.4.4.6: TFRC test points for UE category 6 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	170	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	187	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	

25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	
26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	217	359	
27	17733	16 QAM	108	359	
28	18389	QPSK	217	361	
28	18389	16 QAM	108	361	
29	19045	QPSK	217	363	
29	19045	16 QAM	108	363	
30	19701	QPSK	217	365	
30	19701	16 QAM	108	365	
31	20357	QPSK	217	368	
31	20357	16 QAM	108	368	
32	21013	QPSK	217	370	
32	21013	16 QAM	108	370	
33	21669	QPSK	217	371	
33	21669	16 QAM	108	371	
34	22325	QPSK	217	373	
34	22325	16 QAM	108	373	
35	22981	QPSK	217	375	
35	22981	16 QAM	108	375	
36	23637	QPSK	217	377	
36	23637	16 QAM	108	377	
37	24293	QPSK	217	379	
37	24293	16 QAM	108	379	
38	24949	QPSK	217	380	
38	24949	16 QAM	108	380	
39	25605	QPSK	217	382	
39	25605	16 QAM	108	382	
40	26261	QPSK	217	383	
40	26261	16 QAM	108	383	
41	26917	QPSK	217	385	
41	26917	16 QAM	108	385	
42	27573	QPSK	217	386	
42	27573	16 QAM	108	386	
43	28229	QPSK	217	388	
43	28229	16 QAM	108	388	
44	28885	QPSK	217	389	
44	28885	16 QAM	108	389	
45	29541	QPSK	217	391	
45	29541	16 QAM	108	391	
46	30197	QPSK	217	392	
46	30197	16 QAM	108	392	
47	30853	QPSK	217	394	
47	30853	16 QAM	108	394	
48	31509	QPSK	217	395	
48	31509	16 QAM	108	395	
49	32165	QPSK	217	396	
49	32165	16 QAM	108	396	
50	32821	QPSK	217	397	
50	32821	16 QAM	108	397	
51	33477	QPSK	217	399	

51	33477	16 QAM	108	399	
52	34133	QPSK	217	400	
52	34133	16 QAM	108	400	
53	34789	QPSK	217	401	
53	34789	16 QAM	108	401	
54	35445	QPSK	217	402	
54	35445	16 QAM	108	402	

Table 18.3.1.4.4.7: TFRC test points for UE category 7 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	64	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	104	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	112	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	120	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	128	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	128	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	128	337	
19	12485	16 QAM	76	337	
20	13141	QPSK	128	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	128	343	
21	13797	16 QAM	84	343	
22	14453	QPSK	128	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	128	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	128	352	
24	15765	16 QAM	96	352	
25	16421	QPSK	128	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	128	357	
26	17077	16 QAM	104	357	
27	17733	QPSK	128	359	
27	17733	16 QAM	108	359	
28	18389	QPSK	128	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	128	363	
29	19045	16 QAM	116	363	
30	19701	QPSK	128	365	
30	19701	16 QAM	120	365	
31	20357	QPSK	128	368	
31	20357	16 QAM	124	368	
32	21013	QPSK	128	370	
32	21013	16 QAM	128	370	
33	21669	QPSK	128	371	
33	21669	16 QAM	128	371	
34	22325	QPSK	128	373	
34	22325	16 QAM	128	373	
35	22981	QPSK	128	375	
35	22981	16 QAM	128	375	
36	23637	QPSK	128	377	
36	23637	16 QAM	128	377	
37	24293	QPSK	128	380	
37	24293	16 QAM	128	379	
38	24949	QPSK	128	380	
38	24949	16 QAM	128	380	
39	25605	QPSK	128	382	
39	25605	16 QAM	128	382	
40	26261	QPSK	128	383	
40	26261	16 QAM	128	383	
41	26917	QPSK	128	385	
41	26917	16 QAM	128	385	
42	27573	QPSK	128	386	
42	27573	16 QAM	128	386	
43	28229	QPSK	128	389	
43	28229	16 QAM	128	388	
44	28885	QPSK	128	389	
44	28885	16 QAM	128	389	
45	29541	QPSK	128	391	
45	29541	16 QAM	128	391	
46	30197	QPSK	128	392	
46	30197	16 QAM	128	392	
47	30853	16 QAM	128	394	
48	31509	16 QAM	128	395	
49	32165	16 QAM	128	396	
50	32821	16 QAM	128	397	
51	33477	16 QAM	128	399	
52	34133	16 QAM	128	400	
53	34789	16 QAM	128	401	
54	35445	16 QAM	128	402	
55	36101	16 QAM	128	403	
56	36757	16 QAM	128	404	
57	37413	16 QAM	128	406	
58	38069	16 QAM	128	407	
59	38725	16 QAM	128	408	

60	39381	16 QAM	128	409	
61	40037	16 QAM	128	410	
62	40693	16 QAM	128	411	
63	41349	16 QAM	128	412	
64	42005	16 QAM	128	413	
65	42661	16 QAM	128	414	
66	43317	16 QAM	128	415	
67	43973	16 QAM	128	416	
68	44629	16 QAM	128	417	
69	45285	16 QAM	128	417	
70	45941	16 QAM	128	418	
71	46597	16 QAM	128	419	
72	47253	16 QAM	128	420	
73	47909	16 QAM	128	423	
74	48565	16 QAM	128	423	
75	49221	16 QAM	128	423	
76	49877	16 QAM	128	423	
77	50533	16 QAM	128	424	
78	51189	16 QAM	128	425	
79	51845	16 QAM	128	427	
80	52501	16 QAM	128	427	

Table 18.3.1.4.4.8: TFRC test points for UE category 8 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	170	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	187	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	
25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	220	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	225	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	234	363	
29	19045	16 QAM	117	363	
30	19701	QPSK	242	365	
30	19701	16 QAM	121	365	
31	20357	QPSK	253	368	
31	20357	16 QAM	126	368	
32	21013	QPSK	261	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	264	371	
33	21669	16 QAM	133	371	
34	22325	QPSK	275	373	
34	22325	16 QAM	136	373	
35	22981	QPSK	280	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	289	377	
36	23637	16 QAM	144	377	
37	24293	QPSK	289	379	
37	24293	16 QAM	144	379	
38	24949	QPSK	289	380	
38	24949	16 QAM	144	380	
39	25605	QPSK	289	382	
39	25605	16 QAM	144	382	
40	26261	QPSK	289	383	
40	26261	16 QAM	144	383	
41	26917	QPSK	289	385	
41	26917	16 QAM	144	385	
42	27573	QPSK	289	386	
42	27573	16 QAM	144	386	
43	28229	QPSK	289	388	
43	28229	16 QAM	144	388	
44	28885	QPSK	289	389	
44	28885	16 QAM	144	389	
45	29541	QPSK	289	391	
45	29541	16 QAM	144	391	
46	30197	QPSK	289	392	
46	30197	16 QAM	144	392	
47	30853	QPSK	289	394	
47	30853	16 QAM	144	394	
48	31509	QPSK	289	395	
48	31509	16 QAM	144	395	
49	32165	QPSK	289	396	
49	32165	16 QAM	144	396	
50	32821	QPSK	289	397	
50	32821	16 QAM	144	397	
51	33477	QPSK	289	399	
51	33477	16 QAM	144	399	
52	34133	QPSK	289	400	
52	34133	16 QAM	144	400	
53	34789	QPSK	289	401	

53	34789	16 QAM	144	401	
54	35445	QPSK	289	402	
54	35445	16 QAM	144	402	
55	36101	QPSK	289	403	
55	36101	16 QAM	144	403	
56	36757	QPSK	289	404	
56	36757	16 QAM	144	404	
57	37413	QPSK	289	406	
57	37413	16 QAM	144	406	
58	38069	QPSK	289	407	
58	38069	16 QAM	144	407	
59	38725	QPSK	289	408	
59	38725	16 QAM	144	408	
60	39381	QPSK	289	409	
60	39381	16 QAM	144	409	
61	40037	QPSK	289	410	
61	40037	16 QAM	144	410	
62	40693	QPSK	289	411	
62	40693	16 QAM	144	411	
63	41349	QPSK	289	412	
63	41349	16 QAM	144	412	
64	42005	QPSK	289	413	
64	42005	16 QAM	144	413	
65	42661	QPSK	289	414	
65	42661	16 QAM	144	414	
66	43317	QPSK	289	415	
66	43317	16 QAM	144	415	
67	43973	QPSK	289	416	
67	43973	16 QAM	144	416	
68	44629	QPSK	289	417	
68	44629	16 QAM	144	417	
69	45285	QPSK	289	417	
69	45285	16 QAM	144	417	
70	45941	QPSK	289	418	
70	45941	16 QAM	144	418	
71	46597	QPSK	289	419	
71	46597	16 QAM	144	419	
72	47253	QPSK	289	420	
72	47253	16 QAM	144	420	
73	47909	QPSK	289	421	
73	47909	16 QAM	144	421	
74	48565	QPSK	289	422	
74	48565	16 QAM	144	422	
75	49221	QPSK	289	423	
75	49221	16 QAM	144	423	
76	49877	QPSK	289	423	
76	49877	16 QAM	144	423	
77	50533	QPSK	289	424	
77	50533	16 QAM	144	424	
78	51189	QPSK	289	425	
78	51189	16 QAM	144	425	
79	51845	QPSK	289	426	
79	51845	16 QAM	144	426	
80	52501	QPSK	289	427	
80	52501	16 QAM	144	427	

Table 18.3.1.4.4.9: TFRC test points for UE category 9 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	112	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	120	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	135	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	145	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	150	337	
19	12485	16 QAM	76	337	
20	13141	QPSK	160	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	160	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	160	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	160	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	160	352	
24	15765	16 QAM	96	352	
25	16421	QPSK	160	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	160	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	160	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	160	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	160	363	
29	19045	16 QAM	116	363	
30	19701	QPSK	160	365	
30	19701	16 QAM	120	365	
31	20357	QPSK	160	368	
31	20357	16 QAM	125	368	
32	21013	QPSK	160	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	160	371	
33	21669	16 QAM	130	371	
34	22325	QPSK	160	373	
34	22325	16 QAM	135	373	
35	22981	QPSK	160	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	160	377	
36	23637	16 QAM	145	377	
37	24293	QPSK	160	379	
37	24293	16 QAM	150	379	
38	24949	QPSK	160	380	
38	24949	16 QAM	150	380	
39	25605	QPSK	160	382	
39	25605	16 QAM	155	382	
40	26261	QPSK	160	383	
40	26261	16 QAM	160	383	
41	26917	QPSK	160	385	
41	26917	16 QAM	160	385	
42	27573	QPSK	160	386	
42	27573	16 QAM	160	386	
43	28229	QPSK	160	388	
43	28229	16 QAM	160	388	
44	28885	QPSK	160	389	
44	28885	16 QAM	160	389	
45	29541	QPSK	160	391	
45	29541	16 QAM	160	391	
46	30197	QPSK	160	393	
46	30197	16 QAM	160	392	
47	30853	QPSK	160	394	
47	30853	16 QAM	160	394	
48	31509	QPSK	160	395	
48	31509	16 QAM	160	395	
49	32165	QPSK	160	396	
49	32165	16 QAM	160	396	
50	32821	QPSK	160	397	
50	32821	16 QAM	160	397	
51	33477	QPSK	160	399	
51	33477	16 QAM	160	399	
52	34133	QPSK	160	400	
52	34133	16 QAM	160	400	
53	34789	QPSK	160	401	

53	34789	16 QAM	160	401	
54	35445	QPSK	160	403	
54	35445	16 QAM	160	402	
55	36101	QPSK	160	403	
55	36101	16 QAM	160	403	
56	36757	QPSK	160	404	
56	36757	16 QAM	160	404	
57	37413	QPSK	160	406	
57	37413	16 QAM	160	406	
58	38069	QPSK	160	407	
58	38069	16 QAM	160	407	
59	38725	16 QAM	160	408	
60	39381	16 QAM	160	409	
61	40037	16 QAM	160	410	
62	40693	16 QAM	160	411	
63	41349	16 QAM	160	412	
64	42005	16 QAM	160	413	
65	42661	16 QAM	160	414	
66	43317	16 QAM	160	415	
67	43973	16 QAM	160	416	
68	44629	16 QAM	160	417	
69	45285	16 QAM	160	417	
70	45941	16 QAM	160	418	
71	46597	16 QAM	160	419	
72	47253	16 QAM	160	420	
73	47909	16 QAM	160	421	
74	48565	16 QAM	160	422	
75	49221	16 QAM	160	423	
76	49877	16 QAM	160	423	
77	50533	16 QAM	160	424	
78	51189	16 QAM	160	425	
79	51845	16 QAM	160	426	
80	52501	16 QAM	160	427	
81	53157	16 QAM	160	427	
82	53813	16 QAM	160	428	
83	54469	16 QAM	160	429	
84	55125	16 QAM	160	430	
85	55781	16 QAM	160	430	
86	56437	16 QAM	160	431	
87	57093	16 QAM	160	432	
88	57749	16 QAM	160	433	
89	58405	16 QAM	160	433	
90	59061	16 QAM	160	434	
91	59717	16 QAM	160	437	
92	60373	16 QAM	160	437	
93	61029	16 QAM	160	437	
94	61685	16 QAM	160	437	
95	62341	16 QAM	160	437	
96	62997	16 QAM	160	438	
97	63653	16 QAM	160	439	
98	64309	16 QAM	160	439	
99	64965	16 QAM	160	441	
100	65621	16 QAM	160	441	
101	66277	16 QAM	160	441	
102	66933	16 QAM	160	442	

103	67589	16 QAM	160	442	
104	68245	16 QAM	160	443	
105	68901	16 QAM	160	444	
106	69557	16 QAM	160	444	
107	70213	16 QAM	160	445	
108	70869	16 QAM	160	445	
109	71525	16 QAM	160	446	
110	72181	16 QAM	160	447	
111	72837	16 QAM	160	447	

Table 18.3.1.4.4.10: TFRC test points for UE category 10 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	170	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	187	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	
25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	220	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	225	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	234	363	
29	19045	16 QAM	117	363	
30	19701	QPSK	242	365	
30	19701	16 QAM	121	365	
31	20357	QPSK	253	368	
31	20357	16 QAM	126	368	
32	21013	QPSK	261	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	264	371	
33	21669	16 QAM	133	371	
34	22325	QPSK	275	373	
34	22325	16 QAM	136	373	
35	22981	QPSK	280	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	290	377	
36	23637	16 QAM	145	377	
37	24293	QPSK	300	379	
37	24293	16 QAM	150	379	
38	24949	QPSK	308	380	
38	24949	16 QAM	154	380	
39	25605	QPSK	312	382	
39	25605	16 QAM	156	382	
40	26261	QPSK	320	383	
40	26261	16 QAM	161	383	
41	26917	QPSK	330	385	
41	26917	16 QAM	165	385	
42	27573	QPSK	336	386	
42	27573	16 QAM	168	386	
43	28229	QPSK	348	388	
43	28229	16 QAM	175	388	
44	28885	QPSK	352	389	
44	28885	16 QAM	176	389	
45	29541	QPSK	360	391	
45	29541	16 QAM	180	391	
46	30197	QPSK	361	392	
46	30197	16 QAM	180	392	
47	30853	QPSK	361	394	
47	30853	16 QAM	180	394	
48	31509	QPSK	361	395	
48	31509	16 QAM	180	395	
49	32165	QPSK	361	396	
49	32165	16 QAM	180	396	
50	32821	QPSK	361	397	
50	32821	16 QAM	180	397	
51	33477	QPSK	361	399	
51	33477	16 QAM	180	399	
52	34133	QPSK	361	400	
52	34133	16 QAM	180	400	
53	34789	QPSK	361	401	

53	34789	16 QAM	180	401	
54	35445	QPSK	361	402	
54	35445	16 QAM	180	402	
55	36101	QPSK	361	403	
55	36101	16 QAM	180	403	
56	36757	QPSK	361	404	
56	36757	16 QAM	180	404	
57	37413	QPSK	361	406	
57	37413	16 QAM	180	406	
58	38069	QPSK	361	407	
58	38069	16 QAM	180	407	
59	38725	QPSK	361	408	
59	38725	16 QAM	180	408	
60	39381	QPSK	361	409	
60	39381	16 QAM	180	409	
61	40037	QPSK	361	410	
61	40037	16 QAM	180	410	
62	40693	QPSK	361	411	
62	40693	16 QAM	180	411	
63	41349	QPSK	361	412	
63	41349	16 QAM	180	412	
64	42005	QPSK	361	413	
64	42005	16 QAM	180	413	
65	42661	QPSK	361	414	
65	42661	16 QAM	180	414	
66	43317	QPSK	361	415	
66	43317	16 QAM	180	415	
67	43973	QPSK	361	416	
67	43973	16 QAM	180	416	
68	44629	QPSK	361	417	
68	44629	16 QAM	180	417	
69	45285	QPSK	361	417	
69	45285	16 QAM	180	417	
70	45941	QPSK	361	418	
70	45941	16 QAM	180	418	
71	46597	QPSK	361	419	
71	46597	16 QAM	180	419	
72	47253	QPSK	361	420	
72	47253	16 QAM	180	420	
73	47909	QPSK	361	421	
73	47909	16 QAM	180	421	
74	48565	QPSK	361	422	
74	48565	16 QAM	180	422	
75	49221	QPSK	361	423	
75	49221	16 QAM	180	423	
76	49877	QPSK	361	423	
76	49877	16 QAM	180	423	
77	50533	QPSK	361	424	
77	50533	16 QAM	180	424	
78	51189	QPSK	361	425	
78	51189	16 QAM	180	425	
79	51845	QPSK	361	426	
79	51845	16 QAM	180	426	
80	52501	QPSK	361	427	
80	52501	16 QAM	180	427	

81	53157	QPSK	361	427	
81	53157	16 QAM	180	427	
82	53813	QPSK	361	428	
82	53813	16 QAM	180	428	
83	54469	QPSK	361	429	
83	54469	16 QAM	180	429	
84	55125	QPSK	361	430	
84	55125	16 QAM	180	430	
85	55781	QPSK	361	430	
85	55781	16 QAM	180	430	
86	56437	QPSK	361	431	
86	56437	16 QAM	180	431	
87	57093	QPSK	361	432	
87	57093	16 QAM	180	432	
88	57749	QPSK	361	433	
88	57749	16 QAM	180	433	
89	58405	QPSK	361	433	
89	58405	16 QAM	180	433	
90	59061	QPSK	361	434	
90	59061	16 QAM	180	434	
91	59717	QPSK	361	435	
91	59717	16 QAM	180	435	
92	60373	QPSK	361	435	
92	60373	16 QAM	180	435	
93	61029	QPSK	361	436	
93	61029	16 QAM	180	436	
94	61685	QPSK	361	437	
94	61685	16 QAM	180	437	
95	62341	QPSK	361	437	
95	62341	16 QAM	180	437	
96	62997	QPSK	361	438	
96	62997	16 QAM	180	438	
97	63653	QPSK	361	439	
97	63653	16 QAM	180	439	
98	64309	QPSK	361	439	
98	64309	16 QAM	180	439	
99	64965	QPSK	361	440	
99	64965	16 QAM	180	440	
100	65621	QPSK	361	441	
100	65621	16 QAM	180	441	
101	66277	QPSK	361	441	
101	66277	16 QAM	180	441	
102	66933	QPSK	361	442	
102	66933	16 QAM	180	442	
103	67589	QPSK	361	442	
103	67589	16 QAM	180	442	
104	68245	QPSK	361	443	
104	68245	16 QAM	180	443	
105	68901	QPSK	361	444	
105	68901	16 QAM	180	444	
106	69557	QPSK	361	444	
106	69557	16 QAM	180	444	
107	70213	QPSK	361	445	
107	70213	16 QAM	180	445	
108	70869	QPSK	361	445	

108	70869	16 QAM	180	445	
109	71525	QPSK	361	446	
109	71525	16 QAM	180	446	
110	72181	QPSK	361	448	
110	72181	16 QAM	180	447	
111	72837	QPSK	361	448	
111	72837	16 QAM	180	447	

Table 18.3.1.4.4.11: TFRC test points for UE category 11 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	120	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	168	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	186	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	
25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	217	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	224	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	232	363	
29	19045	16 QAM	116	363	
30	19701	QPSK	240	365	
30	19701	16 QAM	120	365	
31	20357	QPSK	248	368	
31	20357	16 QAM	126	368	
32	21013	QPSK	256	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	256	371	
33	21669	16 QAM	133	371	
34	22325	QPSK	256	373	
34	22325	16 QAM	136	373	
35	22981	QPSK	256	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	256	377	
36	23637	16 QAM	145	377	
37	24293	QPSK	256	379	
37	24293	16 QAM	150	379	
38	24949	QPSK	256	380	
38	24949	16 QAM	154	380	
39	25605	QPSK	256	382	
39	25605	16 QAM	156	382	
40	26261	QPSK	256	383	
40	26261	16 QAM	161	383	
41	26917	QPSK	256	385	
41	26917	16 QAM	162	385	
42	27573	QPSK	256	386	
42	27573	16 QAM	168	386	
43	28229	QPSK	256	388	
43	28229	16 QAM	175	388	
44	28885	QPSK	256	389	
44	28885	16 QAM	176	389	
45	29541	QPSK	256	391	
45	29541	16 QAM	182	391	
46	30197	QPSK	256	392	
46	30197	16 QAM	186	392	
47	30853	QPSK	256	394	
47	30853	16 QAM	192	394	
48	31509	QPSK	256	395	
48	31509	16 QAM	196	395	
49	32165	QPSK	256	396	
49	32165	16 QAM	196	396	
50	32821	QPSK	256	397	
50	32821	16 QAM	200	397	
51	33477	QPSK	256	399	
51	33477	16 QAM	208	399	
52	34133	QPSK	256	400	
52	34133	16 QAM	210	400	
53	34789	QPSK	256	401	

53	34789	16 QAM	210	401	
54	35445	QPSK	256	402	
54	35445	16 QAM	217	402	
55	36101	QPSK	256	403	
55	36101	16 QAM	217	403	
56	36757	QPSK	256	404	
56	36757	16 QAM	224	404	
57	37413	QPSK	256	406	
57	37413	16 QAM	232	406	
58	38069	QPSK	256	407	
58	38069	16 QAM	232	407	
59	38725	QPSK	256	408	
59	38725	16 QAM	240	408	
60	39381	QPSK	256	409	
60	39381	16 QAM	240	409	
61	40037	QPSK	256	410	
61	40037	16 QAM	248	410	
62	40693	QPSK	256	411	
62	40693	16 QAM	248	411	
63	41349	QPSK	256	412	
63	41349	16 QAM	256	412	
64	42005	QPSK	256	413	
64	42005	16 QAM	256	413	
65	42661	QPSK	256	414	
65	42661	16 QAM	256	414	
66	43317	QPSK	256	415	
66	43317	16 QAM	256	415	
67	43973	QPSK	256	416	
67	43973	16 QAM	256	416	
68	44629	QPSK	256	417	
68	44629	16 QAM	256	417	
69	45285	QPSK	256	417	
69	45285	16 QAM	256	417	
70	45941	QPSK	256	418	
70	45941	16 QAM	256	418	
71	46597	QPSK	256	419	
71	46597	16 QAM	256	419	
72	47253	QPSK	256	420	
72	47253	16 QAM	256	420	
73	47909	QPSK	256	423	
73	47909	16 QAM	256	421	
74	48565	QPSK	256	423	
74	48565	16 QAM	256	422	
75	49221	QPSK	256	423	
75	49221	16 QAM	256	423	
76	49877	QPSK	256	423	
76	49877	16 QAM	256	423	
77	50533	QPSK	256	424	
77	50533	16 QAM	256	424	
78	51189	QPSK	256	425	
78	51189	16 QAM	256	425	
79	51845	QPSK	256	427	
79	51845	16 QAM	256	426	
80	52501	QPSK	256	427	
80	52501	16 QAM	256	427	

81	53157	QPSK	256	427	
81	53157	16 QAM	256	427	
82	53813	QPSK	256	428	
82	53813	16 QAM	256	428	
83	54469	QPSK	256	429	
83	54469	16 QAM	256	429	
84	55125	QPSK	256	430	
84	55125	16 QAM	256	430	
85	55781	QPSK	256	430	
85	55781	16 QAM	256	430	
86	56437	QPSK	256	431	
86	56437	16 QAM	256	431	
87	57093	QPSK	256	432	
87	57093	16 QAM	256	432	
88	57749	QPSK	256	433	
88	57749	16 QAM	256	433	
89	58405	QPSK	256	433	
89	58405	16 QAM	256	433	
90	59061	QPSK	256	434	
90	59061	16 QAM	256	434	
91	59717	QPSK	256	435	
91	59717	16 QAM	256	435	
92	60373	QPSK	256	435	
92	60373	16 QAM	256	435	
93	61029	QPSK	256	436	
93	61029	16 QAM	256	436	
94	61685	QPSK	256	437	
94	61685	16 QAM	256	437	
95	62341	QPSK	256	437	
95	62341	16 QAM	256	437	
96	62997	QPSK	256	438	
96	63653	16 QAM	256	439	
97	64309	QPSK	256	439	
97	64965	16 QAM	256	440	
98	65621	QPSK	256	441	
98	66277	16 QAM	256	441	
99	66933	QPSK	256	442	
99	67589	16 QAM	256	442	
100	68245	QPSK	256	443	
100	68901	16 QAM	256	444	
101	69557	QPSK	256	444	
101	70213	16 QAM	256	445	
102	70869	QPSK	256	445	
102	71525	16 QAM	256	446	
103	72181	QPSK	256	447	
103	72837	16 QAM	256	447	
104	73493	QPSK	256	448	
104	74149	16 QAM	256	448	
105	74805	QPSK	256	449	
105	75461	16 QAM	256	449	
106	76117	QPSK	256	450	
106	76773	16 QAM	256	450	
107	77429	QPSK	256	451	
107	78085	16 QAM	256	451	
108	78741	QPSK	256	452	

108	79397	16 QAM	256	453	
109	80053	QPSK	256	453	
109	80709	16 QAM	256	454	
110	81365	QPSK	256	454	
110	82021	16 QAM	256	455	
111	82677	QPSK	256	455	
111	83333	16 QAM	256	456	
112	83989	QPSK	256	456	
112	84652	16 QAM	256	457	
113	85308	QPSK	256	457	
113	85964	16 QAM	256	457	
114	86620	QPSK	256	458	
114	87276	16 QAM	256	458	
115	87932	QPSK	256	459	
115	88588	16 QAM	256	459	
116	89244	QPSK	256	460	
116	89900	16 QAM	256	460	
117	90556	QPSK	256	461	
117	91212	16 QAM	256	461	
118	91868	QPSK	256	462	
118	92524	16 QAM	256	462	
119	93180	QPSK	256	463	
119	93836	16 QAM	256	463	
120	94492	QPSK	256	463	
120	95148	16 QAM	256	464	
121	95804	QPSK	256	464	
121	96460	16 QAM	256	466	
122	97116	QPSK	256	466	
122	97772	16 QAM	256	466	
123	98428	QPSK	256	466	
123	99084	16 QAM	256	466	
124	99740	QPSK	256	467	
124	100396	16 QAM	256	467	
125	101052	QPSK	256	468	
125	101708	16 QAM	256	468	
126	102364	QPSK	256	468	
126	103020	16 QAM	256	469	
127	103676	QPSK	256	469	
127	104332	16 QAM	256	470	
128	104988	QPSK	256	470	
128	105644	16 QAM	256	470	

Table 18.3.1.4.4.12: TFRC test points for UE category 12 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	170	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	187	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	
25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	220	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	225	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	234	363	
29	19045	16 QAM	117	363	
30	19701	QPSK	242	365	
30	19701	16 QAM	121	365	
31	20357	QPSK	253	368	
31	20357	16 QAM	126	368	
32	21013	QPSK	261	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	264	371	
33	21669	16 QAM	133	371	
34	22325	QPSK	275	373	
34	22325	16 QAM	136	373	
35	22981	QPSK	280	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	290	377	
36	23637	16 QAM	145	377	
37	24293	QPSK	300	379	
37	24293	16 QAM	150	379	
38	24949	QPSK	308	380	
38	24949	16 QAM	154	380	
39	25605	QPSK	312	382	
39	25605	16 QAM	156	382	
40	26261	QPSK	320	383	
40	26261	16 QAM	161	383	
41	26917	QPSK	330	385	
41	26917	16 QAM	165	385	
42	27573	QPSK	336	386	
42	27573	16 QAM	168	386	
43	28229	QPSK	348	388	
43	28229	16 QAM	175	388	
44	28885	QPSK	352	389	
44	28885	16 QAM	176	389	
45	29541	QPSK	360	391	
45	29541	16 QAM	182	391	
46	30197	QPSK	372	392	
46	30197	16 QAM	186	392	
47	30853	QPSK	384	394	
47	30853	16 QAM	192	394	
48	31509	QPSK	384	395	
48	31509	16 QAM	196	395	
49	32165	QPSK	384	396	
49	32165	16 QAM	198	396	
50	32821	QPSK	384	397	
50	32821	16 QAM	200	397	
51	33477	QPSK	384	399	
51	33477	16 QAM	208	399	
52	34133	QPSK	384	400	
52	34133	16 QAM	210	400	
53	34789	QPSK	384	401	

53	34789	16 QAM	210	401	
54	35445	QPSK	384	402	
54	35445	16 QAM	217	402	
55	36101	QPSK	384	403	
55	36101	16 QAM	220	403	
56	36757	QPSK	384	404	
56	36757	16 QAM	225	404	
57	37413	QPSK	384	406	
57	37413	16 QAM	232	406	
58	38069	QPSK	384	407	
58	38069	16 QAM	234	407	
59	38725	QPSK	384	408	
59	38725	16 QAM	240	408	
60	39381	QPSK	384	409	
60	39381	16 QAM	243	409	
61	40037	QPSK	384	410	
61	40037	16 QAM	248	410	
62	40693	QPSK	384	411	
62	40693	16 QAM	253	411	
63	41349	QPSK	384	412	
63	41349	16 QAM	256	412	
64	42005	QPSK	384	413	
64	42005	16 QAM	261	413	
65	42661	QPSK	384	414	
65	42661	16 QAM	264	414	
66	43317	QPSK	384	415	
66	43317	16 QAM	270	415	
67	43973	QPSK	384	416	
67	43973	16 QAM	270	416	
68	44629	QPSK	384	417	
68	44629	16 QAM	276	417	
69	45285	QPSK	384	417	
69	45285	16 QAM	276	417	
70	45941	QPSK	384	418	
70	45941	16 QAM	280	418	
71	46597	QPSK	384	419	
71	46597	16 QAM	286	419	
72	47253	QPSK	384	420	
72	47253	16 QAM	289	420	
73	47909	QPSK	384	421	
73	47909	16 QAM	289	421	
74	48565	QPSK	384	422	
74	48565	16 QAM	289	422	
75	49221	QPSK	384	423	
75	49221	16 QAM	289	423	
76	49877	QPSK	384	423	
76	49877	16 QAM	289	423	
77	50533	QPSK	384	424	
77	50533	16 QAM	289	424	
78	51189	QPSK	384	425	
78	51189	16 QAM	289	425	
79	51845	QPSK	384	426	
79	51845	16 QAM	289	426	
80	52501	QPSK	384	427	
80	52501	16 QAM	289	427	

81	53157	QPSK	384	427	
81	53157	16 QAM	289	427	
82	53813	QPSK	384	428	
82	53813	16 QAM	289	428	
83	54469	QPSK	384	429	
83	54469	16 QAM	289	429	
84	55125	QPSK	384	430	
84	55125	16 QAM	289	430	
85	55781	QPSK	384	430	
85	55781	16 QAM	289	430	
86	56437	QPSK	384	431	
86	56437	16 QAM	289	431	
87	57093	QPSK	384	432	
87	57093	16 QAM	289	432	
88	57749	QPSK	384	433	
88	57749	16 QAM	289	433	
89	58405	QPSK	384	433	
89	58405	16 QAM	289	433	
90	59061	QPSK	384	434	
90	59061	16 QAM	289	434	
91	59717	QPSK	384	435	
91	59717	16 QAM	289	435	
92	60373	QPSK	384	435	
92	60373	16 QAM	289	435	
93	61029	QPSK	384	436	
93	61029	16 QAM	289	436	
94	61685	QPSK	384	437	
94	61685	16 QAM	289	437	
95	62341	QPSK	384	437	
95	62341	16 QAM	289	437	
96	62997	QPSK	384	438	
96	62997	16 QAM	289	438	
97	63653	QPSK	384	439	
97	63653	16 QAM	289	439	
98	64309	QPSK	384	439	
98	64309	16 QAM	289	439	
99	64965	QPSK	384	440	
99	64965	16 QAM	289	440	
100	65621	QPSK	384	441	
100	65621	16 QAM	289	441	
101	66277	QPSK	384	441	
101	66277	16 QAM	289	441	
102	66933	QPSK	384	442	
102	66933	16 QAM	289	442	
103	67589	QPSK	384	442	
103	67589	16 QAM	289	442	
104	68245	QPSK	384	443	
104	68245	16 QAM	289	443	
105	68901	QPSK	384	444	
105	68901	16 QAM	289	444	
106	69557	QPSK	384	444	
106	69557	16 QAM	289	444	
107	70213	QPSK	384	445	
107	70213	16 QAM	289	445	
108	70869	QPSK	384	445	

108	70869	16 QAM	289	445	
109	71525	QPSK	384	446	
109	71525	16 QAM	289	446	
110	72181	QPSK	384	448	
110	72181	16 QAM	289	447	
111	72837	QPSK	384	448	
111	72837	16 QAM	289	447	
112	73493	QPSK	384	448	
112	73493	16 QAM	289	448	
113	74149	QPSK	384	448	
113	74149	16 QAM	289	448	
114	74805	QPSK	384	449	
114	74805	16 QAM	289	449	
115	75461	QPSK	384	449	
115	75461	16 QAM	289	449	
116	76117	QPSK	384	450	
116	76117	16 QAM	289	450	
117	76773	QPSK	384	450	
117	76773	16 QAM	289	450	
118	77429	QPSK	384	451	
118	77429	16 QAM	289	451	
119	78085	QPSK	384	451	
119	78085	16 QAM	289	451	
120	78741	QPSK	384	452	
120	78741	16 QAM	289	452	
121	79397	QPSK	384	453	
121	79397	16 QAM	289	453	
122	80053	QPSK	384	453	
122	80053	16 QAM	289	453	
123	80709	QPSK	384	455	
123	80709	16 QAM	289	454	
124	81365	QPSK	384	455	
124	81365	16 QAM	289	454	
125	82021	QPSK	384	455	
125	82021	16 QAM	289	455	
126	82677	QPSK	384	455	
126	82677	16 QAM	289	455	
127	83333	QPSK	384	456	
127	83333	16 QAM	289	456	
128	83989	QPSK	384	456	
128	83989	16 QAM	289	456	
129	84652	QPSK	384	457	
129	84652	16 QAM	289	457	
130	85308	QPSK	384	457	
130	85308	16 QAM	289	457	
131	85964	QPSK	384	457	
131	85964	16 QAM	289	457	
132	86620	QPSK	384	458	
132	86620	16 QAM	289	458	
133	87276	QPSK	384	458	
133	87276	16 QAM	289	458	
134	87932	QPSK	384	459	
134	87932	16 QAM	289	459	
135	88588	QPSK	384	459	
135	88588	16 QAM	289	459	

136	89244	QPSK	384	460	
136	89244	16 QAM	289	460	
137	89900	QPSK	384	460	
137	89900	16 QAM	289	460	
138	90556	QPSK	384	461	
138	90556	16 QAM	289	461	
139	91212	QPSK	384	461	
139	91212	16 QAM	289	461	
140	91868	QPSK	384	462	
140	91868	16 QAM	289	462	
141	92524	QPSK	384	462	
141	92524	16 QAM	289	462	
142	93180	QPSK	289	463	
142	93836	16 QAM	289	463	
143	94492	QPSK	289	463	
143	95148	16 QAM	289	464	
144	95804	QPSK	289	464	
144	96460	16 QAM	289	465	
145	97116	QPSK	289	465	
145	97772	16 QAM	289	466	
146	98428	QPSK	289	466	
146	99084	16 QAM	289	466	
147	99740	QPSK	289	467	
147	100396	16 QAM	289	467	
148	101052	QPSK	289	468	
148	101708	16 QAM	289	468	
149	102364	QPSK	289	468	
149	103020	16 QAM	289	469	
150	103676	QPSK	289	469	
150	104332	16 QAM	289	470	
151	104988	QPSK	289	470	
151	105644	16 QAM	289	470	

Table 18.3.1.4.4.13: TFRC test points for UE category 13 for MAC-d PDU size=656, 7.68Mcps TDD

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of resource units	TFRI	Comments
1	677	QPSK	8	155	
1	677	16 QAM	4	155	
2	1333	QPSK	16	197	
2	1333	16 QAM	8	197	
3	1989	QPSK	24	222	
3	1989	16 QAM	12	222	
4	2645	QPSK	32	240	
4	2645	16 QAM	16	240	
5	3301	QPSK	40	254	
5	3301	16 QAM	20	254	
6	3957	QPSK	48	265	
6	3957	16 QAM	24	265	
7	4613	QPSK	57	275	
7	4613	16 QAM	28	275	
8	5269	QPSK	65	283	
8	5269	16 QAM	32	283	
9	5925	QPSK	72	290	
9	5925	16 QAM	36	290	
10	6581	QPSK	81	297	
10	6581	16 QAM	40	297	
11	7237	QPSK	88	303	
11	7237	16 QAM	44	303	
12	7893	QPSK	96	308	
12	7893	16 QAM	48	308	
13	8549	QPSK	105	313	
13	8549	16 QAM	52	313	
14	9205	QPSK	114	318	
14	9205	16 QAM	57	318	
15	9861	QPSK	121	322	
15	9861	16 QAM	60	322	
16	10517	QPSK	128	326	
16	10517	16 QAM	64	326	
17	11173	QPSK	138	330	
17	11173	16 QAM	69	330	
18	11829	QPSK	147	334	
18	11829	16 QAM	72	334	
19	12485	QPSK	154	337	
19	12485	16 QAM	77	337	
20	13141	QPSK	162	340	
20	13141	16 QAM	81	340	
21	13797	QPSK	170	343	
21	13797	16 QAM	85	343	
22	14453	QPSK	176	346	
22	14453	16 QAM	88	346	
23	15109	QPSK	187	349	
23	15109	16 QAM	93	349	
24	15765	QPSK	196	352	
24	15765	16 QAM	98	352	
25	16421	QPSK	203	354	
25	16421	16 QAM	100	354	

26	17077	QPSK	210	357	
26	17077	16 QAM	105	357	
27	17733	QPSK	220	359	
27	17733	16 QAM	110	359	
28	18389	QPSK	225	361	
28	18389	16 QAM	112	361	
29	19045	QPSK	234	363	
29	19045	16 QAM	117	363	
30	19701	QPSK	242	365	
30	19701	16 QAM	121	365	
31	20357	QPSK	253	368	
31	20357	16 QAM	126	368	
32	21013	QPSK	261	370	
32	21013	16 QAM	130	370	
33	21669	QPSK	264	371	
33	21669	16 QAM	133	371	
34	22325	QPSK	275	373	
34	22325	16 QAM	136	373	
35	22981	QPSK	280	375	
35	22981	16 QAM	140	375	
36	23637	QPSK	290	377	
36	23637	16 QAM	145	377	
37	24293	QPSK	300	379	
37	24293	16 QAM	150	379	
38	24949	QPSK	308	380	
38	24949	16 QAM	154	380	
39	25605	QPSK	312	382	
39	25605	16 QAM	156	382	
40	26261	QPSK	320	383	
40	26261	16 QAM	161	383	
41	26917	QPSK	330	385	
41	26917	16 QAM	165	385	
42	27573	QPSK	336	386	
42	27573	16 QAM	168	386	
43	28229	QPSK	348	388	
43	28229	16 QAM	175	388	
44	28885	QPSK	352	389	
44	28885	16 QAM	176	389	
45	29541	QPSK	360	391	
45	29541	16 QAM	182	391	
46	30197	QPSK	372	392	
46	30197	16 QAM	186	392	
47	30853	QPSK	384	394	
47	30853	16 QAM	192	394	
48	31509	QPSK	384	395	
48	31509	16 QAM	196	395	
49	32165	QPSK	384	396	
49	32165	16 QAM	198	396	
50	32821	QPSK	384	397	
50	32821	16 QAM	200	397	
51	33477	QPSK	384	399	
51	33477	16 QAM	208	399	
52	34133	QPSK	384	400	
52	34133	16 QAM	210	400	
53	34789	QPSK	384	401	

53	34789	16 QAM	210	401	
54	35445	QPSK	384	402	
54	35445	16 QAM	217	402	
55	36101	QPSK	384	403	
55	36101	16 QAM	220	403	
56	36757	QPSK	384	404	
56	36757	16 QAM	225	404	
57	37413	QPSK	384	406	
57	37413	16 QAM	232	406	
58	38069	QPSK	384	407	
58	38069	16 QAM	234	407	
59	38725	QPSK	384	408	
59	38725	16 QAM	240	408	
60	39381	QPSK	384	409	
60	39381	16 QAM	243	409	
61	40037	QPSK	384	410	
61	40037	16 QAM	248	410	
62	40693	QPSK	384	411	
62	40693	16 QAM	253	411	
63	41349	QPSK	384	412	
63	41349	16 QAM	256	412	
64	42005	QPSK	384	413	
64	42005	16 QAM	261	413	
65	42661	QPSK	384	414	
65	42661	16 QAM	264	414	
66	43317	QPSK	384	415	
66	43317	16 QAM	270	415	
67	43973	QPSK	384	416	
67	43973	16 QAM	270	416	
68	44629	QPSK	384	417	
68	44629	16 QAM	276	417	
69	45285	QPSK	384	417	
69	45285	16 QAM	276	417	
70	45941	QPSK	384	418	
70	45941	16 QAM	280	418	
71	46597	QPSK	384	419	
71	46597	16 QAM	286	419	
72	47253	QPSK	384	420	
72	47253	16 QAM	290	420	
73	47909	QPSK	384	421	
73	47909	16 QAM	297	421	
74	48565	QPSK	384	422	
74	48565	16 QAM	300	422	
75	49221	QPSK	384	423	
75	49221	16 QAM	300	423	
76	49877	QPSK	384	423	
76	49877	16 QAM	300	423	
77	50533	QPSK	384	424	
77	50533	16 QAM	310	424	
78	51189	QPSK	384	425	
78	51189	16 QAM	312	425	
79	51845	QPSK	384	426	
79	51845	16 QAM	320	426	
80	52501	QPSK	384	427	
80	52501	16 QAM	324	427	

81	53157	QPSK	384	427	
81	53157	16 QAM	324	427	
82	53813	QPSK	384	428	
82	53813	16 QAM	330	428	
83	54469	QPSK	384	429	
83	54469	16 QAM	336	429	
84	55125	QPSK	384	430	
84	55125	16 QAM	341	430	
85	55781	QPSK	384	430	
85	55781	16 QAM	341	430	
86	56437	QPSK	384	431	
86	56437	16 QAM	348	431	
87	57093	QPSK	384	432	
87	57093	16 QAM	352	432	
88	57749	QPSK	384	433	
88	57749	16 QAM	360	433	
89	58405	QPSK	384	433	
89	58405	16 QAM	360	433	
90	59061	QPSK	384	434	
90	59061	16 QAM	360	434	
91	59717	QPSK	384	435	
91	59717	16 QAM	360	435	
92	60373	QPSK	384	435	
92	60373	16 QAM	360	435	
93	61029	QPSK	384	436	
93	61029	16 QAM	372	436	
94	61685	QPSK	384	437	
94	61685	16 QAM	384	437	
95	62341	QPSK	384	437	
95	62341	16 QAM	384	437	
96	62997	QPSK	384	438	
96	62997	16 QAM	384	438	
97	63653	QPSK	384	439	
97	63653	16 QAM	384	439	
98	64309	QPSK	384	439	
98	64309	16 QAM	384	439	
99	64965	QPSK	384	440	
99	64965	16 QAM	384	440	
100	65621	QPSK	384	441	
100	65621	16 QAM	384	441	
101	66277	QPSK	384	441	
101	66277	16 QAM	384	441	
102	66933	QPSK	384	442	
102	66933	16 QAM	384	442	
103	67589	QPSK	384	442	
103	67589	16 QAM	384	442	
104	68245	QPSK	384	443	
104	68245	16 QAM	384	443	
105	68901	QPSK	384	444	
105	68901	16 QAM	384	444	
106	69557	QPSK	384	444	
106	69557	16 QAM	384	444	
107	70213	QPSK	384	445	
107	70213	16 QAM	384	445	
108	70869	QPSK	384	445	

108	70869	16 QAM	384	445	
109	71525	QPSK	384	446	
109	71525	16 QAM	384	446	
110	72181	QPSK	384	448	
110	72181	16 QAM	384	447	
111	72837	QPSK	384	448	
111	72837	16 QAM	384	447	
112	73493	QPSK	384	448	
112	73493	16 QAM	384	448	
113	74149	QPSK	384	448	
113	74149	16 QAM	384	448	
114	74805	QPSK	384	449	
114	74805	16 QAM	384	449	
115	75461	QPSK	384	449	
115	75461	16 QAM	384	449	
116	76117	QPSK	384	450	
116	76117	16 QAM	384	450	
117	76773	QPSK	384	450	
117	76773	16 QAM	384	450	
118	77429	QPSK	384	451	
118	77429	16 QAM	384	451	
119	78085	QPSK	384	451	
119	78085	16 QAM	384	451	
120	78741	QPSK	384	452	
120	78741	16 QAM	384	452	
121	79397	QPSK	384	453	
121	79397	16 QAM	384	453	
122	80053	QPSK	384	453	
122	80053	16 QAM	384	453	
123	80709	QPSK	384	455	
123	80709	16 QAM	384	454	
124	81365	QPSK	384	455	
124	81365	16 QAM	384	454	
125	82021	QPSK	384	455	
125	82021	16 QAM	384	455	
126	82677	QPSK	384	455	
126	82677	16 QAM	384	455	
127	83333	QPSK	384	456	
127	83333	16 QAM	384	456	
128	83989	QPSK	384	456	
128	83989	16 QAM	384	456	
129	84652	QPSK	384	457	
129	84652	16 QAM	384	457	
130	85308	QPSK	384	457	
130	85308	16 QAM	384	457	
131	85964	QPSK	384	457	
131	85964	16 QAM	384	457	
132	86620	QPSK	384	458	
132	86620	16 QAM	384	458	
133	87276	QPSK	384	458	
133	87276	16 QAM	384	458	
134	87932	QPSK	384	459	
134	87932	16 QAM	384	459	
135	88588	QPSK	384	459	
135	88588	16 QAM	384	459	

136	89244	QPSK	384	460	
136	89244	16 QAM	384	460	
137	89900	QPSK	384	460	
137	89900	16 QAM	384	460	
138	90556	QPSK	384	461	
138	90556	16 QAM	384	461	
139	91212	QPSK	384	461	
139	91212	16 QAM	384	461	
140	91868	QPSK	384	462	
140	91868	16 QAM	384	462	
141	92524	QPSK	384	462	
141	92524	16 QAM	384	462	
142	93180	16 QAM	384	463	
143	93836	16 QAM	384	463	
144	94492	16 QAM	384	463	
145	95148	16 QAM	384	464	
146	95804	16 QAM	384	464	
147	96460	16 QAM	384	465	
148	97116	16 QAM	384	465	
149	97772	16 QAM	384	466	
150	98428	16 QAM	384	466	
151	99084	16 QAM	384	466	
152	99740	16 QAM	384	467	
153	100396	16 QAM	384	467	
154	101052	16 QAM	384	468	
155	101708	16 QAM	384	468	
156	102364	16 QAM	384	468	
157	103020	16 QAM	384	469	
158	103676	16 QAM	384	469	
159	104332	16 QAM	384	470	
160	104988	16 QAM	384	470	
161	105644	16 QAM	384	470	
162	106300	16 QAM	384	471	
163	106956	16 QAM	384	471	
164	107612	16 QAM	384	472	
165	108268	16 QAM	384	472	
166	108924	16 QAM	384	472	
167	109580	16 QAM	384	473	
168	110236	16 QAM	384	473	
169	110892	16 QAM	384	473	
170	111548	16 QAM	384	474	
171	112204	16 QAM	384	474	
172	112860	16 QAM	384	474	
173	113516	16 QAM	384	475	
174	114172	16 QAM	384	475	
175	114828	16 QAM	384	476	
176	115484	16 QAM	384	476	
177	116140	16 QAM	384	476	
178	116796	16 QAM	384	477	
179	117452	16 QAM	384	477	
180	118108	16 QAM	384	477	
181	118764	16 QAM	384	478	
182	119420	16 QAM	384	478	
183	120076	16 QAM	384	478	
184	120732	16 QAM	384	479	

185	121388	16 QAM	384	479	
186	122044	16 QAM	384	479	
187	122700	16 QAM	384	480	
188	123356	16 QAM	384	480	
189	124012	16 QAM	384	480	
190	124668	16 QAM	384	481	
191	125324	16 QAM	384	481	
192	125980	16 QAM	384	481	
193	126636	16 QAM	384	482	
194	127292	16 QAM	384	482	
195	127948	16 QAM	384	482	
196	128604	16 QAM	384	483	
197	129260	16 QAM	384	483	
198	129916	16 QAM	384	483	
199	130572	16 QAM	384	484	
200	131228	16 QAM	384	484	
201	131884	16 QAM	384	484	
202	132540	16 QAM	384	485	
203	133196	16 QAM	384	485	
204	133852	16 QAM	384	485	
205	134508	16 QAM	384	485	
206	135164	16 QAM	384	486	
207	135820	16 QAM	384	486	
208	136476	16 QAM	384	486	
209	137132	16 QAM	384	487	
210	137788	16 QAM	384	487	
211	138444	16 QAM	384	487	
212	139100	16 QAM	384	488	
213	139756	16 QAM	384	488	
214	140412	16 QAM	384	488	
215	141068	16 QAM	384	488	
216	141724	16 QAM	384	489	
217	142380	16 QAM	384	489	
218	143036	16 QAM	384	489	
219	143692	16 QAM	384	491	
220	144348	16 QAM	384	491	
221	145004	16 QAM	384	491	
222	145660	16 QAM	384	491	
223	146316	16 QAM	384	491	
224	146972	16 QAM	384	491	
225	147628	16 QAM	384	491	
226	148284	16 QAM	384	492	
227	148940	16 QAM	384	492	
228	149596	16 QAM	384	492	
229	150252	16 QAM	384	492	
230	150908	16 QAM	384	493	
231	151564	16 QAM	384	493	
232	152220	16 QAM	384	493	
233	152876	16 QAM	384	493	
234	153532	16 QAM	384	494	
235	154188	16 QAM	384	494	
236	154844	16 QAM	384	494	
237	155500	16 QAM	384	495	
238	156156	16 QAM	384	495	
239	156812	16 QAM	384	495	

240	157468	16 QAM	384	495	
241	158124	16 QAM	384	496	
242	158780	16 QAM	384	496	
243	159436	16 QAM	384	496	
244	160092	16 QAM	384	496	
245	160748	16 QAM	384	497	
246	161404	16 QAM	384	497	
247	162060	16 QAM	384	497	
248	162716	16 QAM	384	497	
249	163372	16 QAM	384	498	
250	164028	16 QAM	384	498	
251	164684	16 QAM	384	498	
252	165340	16 QAM	384	498	
253	165996	16 QAM	384	499	
254	166652	16 QAM	384	499	
255	167308	16 QAM	384	499	
256	167964	16 QAM	384	499	
257	168627	16 QAM	384	501	
258	169283	16 QAM	384	501	
259	169939	16 QAM	384	501	
260	170595	16 QAM	384	501	
261	171251	16 QAM	384	501	
262	171907	16 QAM	384	501	
263	172563	16 QAM	384	501	
264	173219	16 QAM	384	501	
265	173875	16 QAM	384	501	
266	174531	16 QAM	384	502	
267	175187	16 QAM	384	502	
268	175843	16 QAM	384	502	
269	176499	16 QAM	384	502	
270	177155	16 QAM	384	503	
271	177811	16 QAM	384	503	
272	178467	16 QAM	384	503	
273	179123	16 QAM	384	503	
274	179779	16 QAM	384	504	
275	180435	16 QAM	384	504	
276	181091	16 QAM	384	504	
277	181747	16 QAM	384	504	
278	182403	16 QAM	384	504	
279	183059	16 QAM	384	505	
280	183715	16 QAM	384	505	
281	184371	16 QAM	384	505	
282	185027	16 QAM	384	505	

18.3.1.5 Generic test procedure radio bearers on MTCH

See 14.1.5 for test procedure

18.3.1.6 Generic test procedure for radio bearers on MBSFN MTCH

18.3.1.6.1 Initial conditions

System Simulator:

- 1 MBMS MBSFN Cell 31 with default parameters.

In addition to broadcasting System Information, MCCH messages are transmitted by the SS using MBMS configuration C1 and Default1 MCCH scheduling (No ongoing service). See subclause 11.1 of TS 34.108.

- 1 unicast carrier Cell 1 with default parameters.

User Equipment:

- On the unicast carrier cell the UE is in registered Idle Mode on PS (state 3) if the UE only supports PS domain or registered Idle Mode on CS/PS (state 7) if the UE supports both CS and PS domains, as specified in clause 7.2.2 of TS 34.108.

- The UE is in MBSFN Idle mode with one activated service as specified in clause 7.6.4 of TS 34.108. The UE has selected the broadcast service to be provided by the SS on the MBSFN cell (included in MBMS_ACTIVATED_SERVICES variable).

18.3.1.6.2 Test procedure

a) The SS sends CLOSE UE TEST LOOP via the unicast carrier cell, requesting activation of Test Loop Mode 3 specifying the MBSFN MBMS short transmission identity of the MTCH for the activated service

b) The SS notifies on MCCH about the start of an MBMS session and waits for the UE to activate MTCH reception at the specified activation time.

c) At the specified activation time the UE establishes the p-t-m radio bearer and closes the UE test loop. The UE sends CLOSE UE TEST LOOP COMPLETE..

d) The SS broadcasts 10 RLC SDUs on the MTCH configured on the concerned MBMS radio bearer. The MBMS data is broadcast using RLC SDU size and transport format as specified for sub-test 1.

e) The SS retrieves the number of RLC SDUs on MTCH counted by the UE by sending the UE TEST LOOP MODE 3 RLC SDU COUNTER REQUEST message. The SS checks that the UE has received at least one RLC SDU.

f) Repeat steps g) and h) for the remaining sub-tests.

g) The SS broadcast 10 RLC SDUs on the MTCH configured on the concerned MBMS radio bearer. The MBMS data is broadcasted using RLC SDU size and transport format as specified for the sub-test under test.

h) The SS retrieves the number of RLC SDUs on MTCH counted by the UE by sending the UE TEST LOOP MODE 3 RLC SDU COUNTER REQUEST message. The SS checks that the UE has received at least one RLC SDU of the MBMS data sent in step g).

i) The SS deactivates the UE test loop mode 3.

NOTE 1: For a UE in UE test loop mode 3 the RLC SDU counter value is only reset upon reception of the CLOSE UE TEST LOOP message configuring UE test loop mode 3. To enable the SS to measure the number of received RLC SDUs for the different sub-tests the SS needs to record the reported values for each sub-test and perform the checking of the reported value relative to the previously reported value.

Expected sequence

Step	Direction		Carrier	Message	Comment
	UE	SS			
1	←		U	ACTIVATE RB TEST MODE	
2	→		U	ACTIVATE RB TEST MODE COMPLETE	
3	←		U	CLOSE UE TEST LOOP	Loop back mode 3 on MTCH for the activated service.
4	←		M	MBMS MCCH Message Configuration C4	Includes the service activated at UE in the modified services list for one modification period.
5	←		M	MBMS MCCH Message Configuration C2	No modified services. One ongoing service corresponding to that activated at the UE.
6	→		U	CLOSE UE TEST LOOP COMPLETE	The UE establishes the MTCH according to the activation time and closes the test loop.
7		SS	M		The SS transmits 10 RLC SDUs on the MTCH. The MBMS data is broadcast using RLC SDU size and transport format as specified for sub-test 1.
8	←		U	UE TEST LOOP MODE 3 RLC SDU COUNTER REQUEST	.
9	→		U	UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE	The SS checks that the number of reported RLC PDUs is greater than zero and records the value.
10		SS			The SS repeats steps 10 to 12 for the remaining sub-tests (sub-test 2 etc.).
11		SS	M		The SS transmits 10 RLC SDUs on the MTCH. The MBMS data is broadcast using RLC SDU size and transport format as specified for the current sub-test under test.
12	←		U	UE TEST LOOP MODE 3 RLC SDU COUNTER REQUEST	
13	→		U	UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE	The SS checks that the number of reported RLC PDUs is greater than the recorded value from the previous sub-test. The SS records the reported value.
14	←		U	OPEN UE TEST LOOP	
15	→		U	OPEN UE TEST LOOP COMPLETE	
16	←		U	DEACTIVATE RB TEST MODE	
17	→		U	DEACTIVATE RB TEST MODE COMPLETE	

Specific Message Contents

MBMS MODIFIED SERVICES INFORMATION (Step 4)

Information Element	Value/remark
Message type	
Modified service list	
- MBMS Transmission identity	
- MBMS Service ID	1
- MBMS Session ID	1
- MBMS required UE action	Acquire PTM RB info
MBMS p-t-m activation time	SS shall choose a value which is sufficiently far ahead for the UE to establish the MTCH

UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE (Steps 9)

Information Element	Value/remark
RLC SDU Counter Value	Check that the number is greater than zero

UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE (Steps 13)

Information Element	Value/remark
RLC SDU Counter Value	Check that the number is greater than the value reported at the previous sub-test.

18.3.1.7 General information for interoperability radio bearer tests for E-DCH and HS-DSCH combinations

18.3.1.7.1 Generic test procedure for HS-DSCH and E-DCH radio bearer combinations

This procedure is used to test E-DCH radio bearer combinations. The procedure is run once for each sub-test of the actual E-DCH radio bearer test case.

Definition of test variables:

$N_{\underline{TS}}$	The number of HS-DSCH timeslots as specified by the sub-test. This parameter is dependent on the UE capability.
$N_{\underline{codes}}$	The number of HS-DSCH codes (1..32) as specified by the sub-test. This parameter is not dependent on UE capability, all UEs can support 32 HS-DSCH codes.
M	The type of modulation scheme (QPSK, 16QAM) as specified by the sub-test.
N_{PDUs}	The number of MAC-d PDUs for the DTCH(s) mapped on HS-DSCH as specified by the sub-test.
$H_{\underline{ID}}$	The HARQ process identifier (0..3) as specified by the sub-test.

18.3.1.7.1.1 Initial conditions

UE in idle mode

18.3.1.7.1.2 Test procedure

a) The SS establish the reference radio bearer configuration as specified in TS 34.108, clause 6.11 for the actual radio bearer test. For the case when the reference radio bearer configuration includes radio bearers for both CS and PS domain then the radio bearer setup procedure has to be performed once per domain. The first radio bearer setup procedure shall perform configuration of the physical channel for the radio bearer combination under test as well as the transport channels for the CS radio bearer(s). The second radio bearer procedure shall perform the configuration for the transport channel for the PS radio bearers . The Physical channel configuration shall be done for both CS and PS radio bearers combined. Here the transport format combination set for both CS and PS radio bearers shall be provided. See note 1 and note 3.

b) For DTCH mapped to DCH in uplink the SS limits the UE allowed uplink transport format combinations according to the "Restricted UL TFCIs", as specified for the sub-test of the actual radio bearer test, using the RRC transport format combination control procedure. See note 2.

c) The SS closes the test loop using UE test loop mode 1 and set the UL RLC SDU size parameter, for all radio bearers under test, according to the "UL RLC SDU size" value as specified for the sub-test of the actual radio bearer test.

d) The SS issues an absolute grant that allows the UE to send at maximum bit rate.

e) The SS sets the HS-DSCH TFRC test point as specified for the sub-test (N_{PDUs} , M, $N\underline{codes}$, $N_{\underline{TS}}$ and $TFRI$).

f) The SS sets $H_{\underline{ID}}$ to the number of HARQ processes specified for the sub-test.

h) The SS transmits, for each DTCH mapped to HS-DSCH, a DL RLC SDUs having the size equal the to the “Test data size” as specified for the sub-test concatenated into a MAC-hs PDU using the selected TFRC and H_{ID}. If the radio bearer combination under test includes downlink DTCHs mapped to DCH then the SS transmits, for all DTCHs mapped to DCH, one or more RLC SDUs having the size equal to the "Test data size" as specified for the sub-test.

i) The SS checks that the content of the UE returned RLC SDUs have the correct content and are received having the correct transport format. See TS 34.109 [10] clause 5.3.2.6.2 for details regarding the UE loopback of RLC SDUs.

j) The SS opens the UE test loop.

l) The SS release the radio bearer. See note 4.

m) Steps a) to l) are repeated for all sub-tests. See note 5.

n) The SS may optionally deactivate the radio bearer test mode.

NOTE 1: The SS configures the physical channel parameters according to the actual UE category under test. The number of soft channel bits per HARQ process is split equally among the number of HARQ processes configured for the actual sub-test - i.e. “Total number of soft channel bits” for the UE category according to table 18.3.1.4.1.1 divided by the number of HARQ processes under test. The number of reordering queues are 1 for single HS-DSCH radio bearer configurations. The MAC-hs window size, RLC Transmission window size and RLC Receiving window size shall be configured as specified for the actual sub-test.

NOTE 2: The restricted set of uplink TFCIs shall contain all possible TFCI that could happen in a sub-test. The actual TTI of the different radio bearers and signalling radio bearers as well as the possible UE processing delays shall be taken into consideration. The restricted set of TFCIs must comply with the minimum set of TFCIs as specified in TS 25.331, clause 8.6.5.2.

NOTE 3: The MAC-hs window size and RLC Receiver and transmitter window sizes need to be chosen such that the UE capability for “Minimum total RLC AM and MAC-hs buffer size” is not exceeded for the UE category under test.

NOTE 4: The Secondary scrambling code in the RADIO BEARER RELEASE message is set to the same value used in the RADIO BEARER SETUP MESSAGE.

NOTE 5: CS radio bearer is setup once during the first sub-test.

Expected sequence (repeated for each sub-test, see note 3)

Step	Direction		Message	Comments
	UE	SS		
Case A: PS radio bearers only				
A1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
A2	<--		PAGING TYPE 1 (PCCH)	Paging (PS domain, P-TMSI)
A3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
A4	<--		RRC CONNECTION SETUP (CCCH)	RRC
A5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
A6	-->		SERVICE REQUEST (DCCH)	GMM
A7	<--		SECURITY MODE COMMAND	RRC see note 1
A8	-->		SECURITY MODE COMPLETE	RRC see note 1
A9	<--		ACTIVATE RB TEST MODE (DCCH)	TC
A10	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
A11	<--		RADIO BEARER SETUP (DCCH)	RRC PS radio bearer(s) are configured. For the PS radio bearer(s) the 'pdcp info' IE shall be omitted.
A12	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
End of branch for Case A				
Case B: CS + PS radio bearers				
B1	<--		SYSTEM INFORMATION (BCCH)	Broadcast
B2	<--		PAGING TYPE 1 (PCCH)	Paging (CS domain, TMSI)
B3	-->		RRC CONNECTION REQUEST (CCCH)	RRC
B4	<--		RRC CONNECTION SETUP (CCCH)	RRC
B5	-->		RRC CONNECTION SETUP COMPLETE (DCCH)	RRC
B6	-->		PAGING RESPONSE (DCCH)	RR
B6a	<--		AUTHENTICATION REQUEST	
B6b	-->		AUTHENTICATION RESPONSE	
B7	<--		SECURITY MODE COMMAND	
B8	-->		SECURITY MODE COMPLETE	
B9	<--		PAGING TYPE 2 (DCCH)	TMSI (GSM-MAP)/ P-TMSI
B9a	-->		SERVICE REQUEST (DCCH)	GMM
B9b	<--		SECURITY MODE COMMAND	RRC See note 2
B9c	-->		SECURITY MODE COMPLETE	RRC
B10	<--		ACTIVATE RB TEST MODE (DCCH)	TC
B10a	-->		ACTIVATE RB TEST MODE COMPLETE (DCCH)	TC
B11	<--		RADIO BEARER SETUP (DCCH)	RRC CS radio bearer(s) are configured
B12	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
B12a	<--		RADIO BEARER SETUP (DCCH)	RRC PS radio bearer(s) are configured. For the PS radio bearer the 'pdcp info' IE shall be omitted.
B12b	-->		RADIO BEARER SETUP COMPLETE (DCCH)	RRC
B12c	<--		TRANSPORT FORMAT COMBINATION CONTROL (DCCH)	RRC Transport format combinations is limited to "Restricted UL TFCIs", as specified for the sub-test
End of branch for Case B				
13			Void	
14	<--		CLOSE UE TEST LOOP (DCCH)	TC UE test mode 1 RLC SDU size is for every active radio bearer set to "UL RLC SDU size", as specified for the sub-test.
15	-->		CLOSE UE TEST LOOP COMPLETE (DCCH)	TC
16	SS			The SS sets the HS-DSCH TFRC test point (N_{PDUs} , M, Ncodes, N_{TS} and TFRI). and the number of HARQ processes as specified for the sub-test.

Step	Direction		Message	Comments
	UE	SS		
17	<--		DOWNLINK MAC-hs PDU (HS-DSCH#1) … DOWNLINK MAC-hs PDU (HS-DSCH#N) DL RLC SDU (DL DCH#1) … DL RLC SDU (DL DCH#M)	For each DTCH mapped on HS-DSCH the SS sends test data. For each DTCH mapped on DCH the SS sends test data using the downlink transport format combination under test.
18	-->		UPLINK RLC SDUs	The SS checks, for each DTCH, that the content and transport format of the received UL RLC SDUs are correct.
19	<--		OPEN UE TEST LOOP (DCCH)	TC
20	-->		OPEN UE TEST LOOP COMPLETE (DCCH)	TC
21			RB RELEASE	RRC
22	<--		DEACTIVATE RB TEST MODE	TC Optional step
23	-->		DEACTIVATE RB TEST MODE COMPLETE	TC Optional step

NOTE 1 In addition to activate integrity protection Step 6 and Step 7 are inserted in order to stop T3317 timer in the UE, which starts after transmitting SERVICE REQUEST message.

NOTE 2 For case B (CS+PS radio bearers) the second security mode procedure is needed to enable testing of ciphering on the PS radio bearers.

NOTE 3 For case A (PS radio bearers) steps A1 to A10 will be executed once during first sub-test. For case B (CS+PS radio bearers) steps B1 to B12 will be executed once during first sub-test.

18.3.2 Combinations on DPCH

18.3.2.1 Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH

Test to verify establishment and signalling of stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.1.

The test case is performed by running test case 9.4.1 (Location updating / accepted) using the stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.1.

18.3.2.1a Stand-alone UL:1.7 DL:1.7 kbps SRBs for DCCH (multiframe)

Test to verify establishment and signalling of stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.1a.

The test case is performed by running test case 9.4.1 (Location updating / accepted) using the stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.1a.

18.3.2.2 Stand-alone UL:3.4 DL:3.4 kbps SRBs for DCCH

Test to verify establishment and signalling of stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.2.

The test case is performed by running test case 9.4.1 (Location updating / accepted) using the stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.2.

18.3.2.3 Stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH

Implicitly tested.

NOTE The stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH in TS 34.108, clause 6.11.6.4.1.3 is the default signalling radio bearer used in the generic setup procedure as specified in TS 34.108 clause 7.

18.3.2.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.4.1 Conformance requirement

The UE shall be able to establish the UTRAN requested radio bearers within the UE's signalled radio access capabilities.

The UE shall correctly transfer user data from peer to peer RLC entities according to the requested radio bearer configuration.

Reference(s)

3GPP TS 25.331, clause 8.2.1

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

18.3.2.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.4.

18.3.2.4.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x148
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x148
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 103 bits RB7: 60 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 81 bits RB6: 103 bits RB7: 60 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.4.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x81); RB6/TF1 (1x103); and RB7/TF1 (1x60).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.
   - for sub-test 2: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS

18.3.2.4a Conversational / speech / UL:(12.2 7.95 5.9 4.75) DL:(12.2 7.95 5.9 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.4a.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.4a.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.4a.

18.3.2.4a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x148
	TF1, bits	1x39	1x53	1x60	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0, TF0)
UL_TFC3	(TF3, TF2, TF0, TF0)
UL_TFC4	(TF4, TF3, TF0, TF0)
UL_TFC5	(TF5, TF4, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF0, TF1)
UL_TFC9	(TF3, TF2, TF0, TF1)
UL_TFC10	(TF4, TF3, TF0, TF1)
UL_TFC11	(TF5, TF4, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81(alt. 1x0)	0x103	0x60	0x148
	TF1, bits	1x39	1x53	1x60	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x84	N/A	N/A
	TF4, bits	1x75	1x103	N/A	N/A
	TF5, bits	1x81	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0, TF0)
DL_TFC3	(TF3, TF2, TF0, TF0)
DL_TFC4	(TF4, TF3, TF0, TF0)
DL_TFC5	(TF5, TF4, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF0, TF1)
DL_TFC9	(TF3, TF2, TF0, TF1)
DL_TFC10	(TF4, TF3, TF0, TF1)
DL_TFC11	(TF5, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 103 bits RB7: 60 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits RB7: 60 bits	RB5: 42 bits RB6: 53 bits RB7: No data
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits RB7: 60 bits	RB5: 55 bits RB6: 63 bits RB7: No data
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 75 bits RB6: 84 bits RB7: 60 bits	RB5: 75 bits RB6: 84 bits RB7: No data
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 81 bits RB6: 103 bits RB7: 60 bits	RB5: 81 bits RB6: 103 bits RB7: 60 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 18.3.1.1 for test procedure.

18.3.2.4a.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x75) and RB6/TF3 (1x84)
   - for sub-test 5: RB5/TF5 (1x81), RB6/TF4 (1x103) and RB7/TF1 (1x60)

3. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.

   - for sub-test 2,3 and 4: an RLC SDU on RB5 and RB6 having the same content as sent by SS; and no data shall be received on RB7.

   - for sub-test 5: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS.

18.3.2.5 Conversational / speech / UL:10.2 DL:10.2 kbps / CS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.5.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.5.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.5.

18.3.2.5.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x65(alt. 1x0)	0x99	0x40	0x148
	TF1, bits	1x39	1x99	1x40	1x148
	TF2, bits	1x65	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x65(alt. 1x0)	0x99	0x40	0x148
	TF1, bits	1x39	1x99	1x40	1x148
	TF2, bits	1x65	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 99 bits RB7: 40 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 65 bits RB6: 99 bits RB7: 40 bits	RB5: 65 bits RB6: 99 bits RB7: 40 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.5.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x65); RB6/TF1 (1x99); and RB7/TF1 (1x40).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.
   - for sub-test 2: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS.

18.3.2.5a Conversational / speech / UL:(10.2, 6.7, 5.9, 4.75) DL:(10.2, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.5a.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.5a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.5a.

18.3.2.5a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x65(alt. 1x0)	0x99	0x40	0x148
	TF1, bits	1x39	1x53	1x40	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x76	N/A	N/A
	TF4, bits	1x58	1x99	N/A	N/A
	TF5, bits	1x65	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0, TF0)
UL_TFC3	(TF3, TF2, TF0, TF0)
UL_TFC4	(TF4, TF3, TF0, TF0)
UL_TFC5	(TF5, TF4, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF0, TF1)
UL_TFC9	(TF3, TF2, TF0, TF1)
UL_TFC10	(TF4, TF3, TF0, TF1)
UL_TFC11	(TF5, TF4, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x65(alt. 1x0)	0x99	0x40	0x148
	TF1, bits	1x39	1x53	1x40	1x148
	TF2, bits	1x42	1x63	N/A	N/A
	TF3, bits	1x55	1x76	N/A	N/A
	TF4, bits	1x58	1x99	N/A	N/A
	TF5, bits	1x65	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0, TF0)
DL_TFC3	(TF3, TF2, TF0, TF0)
DL_TFC4	(TF4, TF3, TF0, TF0)
DL_TFC5	(TF5, TF4, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF0, TF1)
DL_TFC9	(TF3, TF2, TF0, TF1)
DL_TFC10	(TF4, TF3, TF0, TF1)
DL_TFC11	(TF5, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 99 bits RB7: 40 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits RB7: 40 bits	RB5: 42 bits RB6: 53 bits RB7: No data
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits RB7: 40 bits	RB5: 55 bits RB6: 63 bits RB7: No data
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 58 bits RB6: 76 bits RB7: 40 bits	RB5: 58 bits RB6: 76 bits RB7: No data
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 65 bits RB6: 99 bits RB7: 40 bits	RB5: 65 bits RB6: 99 bits RB7: 40 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 18.3.1.1 for test procedure.

18.3.2.5a.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x58) and RB6/TF3 (1x76)
   - for sub-test 5: RB5/TF5 (1x65), RB6/TF4 (1x99) and RB7/TF1 (1x40)

3. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6 or RB7.

   - for sub-test 2, 3 and 4: an RLC SDU on RB5 and RB6 having the same content as sent by the SS; and no data shall be received on RB7.

   - for sub-test 5: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by the SS.

18.3.2.6 Conversational / speech / UL:7.95 DL:7.95 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.6.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.6.

18.3.2.6.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x75(alt. 1x0)	0x84	0x148
	TF1, bits	1x39	1x84	1x148
	TF2, bits	1x75	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x75(alt. 1x0)	0x84	0x148
	TF1, bits	1x39	1x84	1x148
	TF2, bits	1x75	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 84 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 75 bits RB6: 84 bits	RB5: 75 bits RB6: 84 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

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18.3.2.6.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x75) and RB6/TF1 (1x84).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS.

18.3.2.7 Conversational / speech / UL:7.4 DL:7.4 kbps / CS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.7.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.7.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.7.

18.3.2.7.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x61 (alt. 1x0)	0x87	0x148
	TF1, bits	1x39	1x87	1x148
	TF2, bits	1x61	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x61 (alt. 1x0)	0x87	0x148
	TF1, bits	1x39	1x87	1x148
	TF2, bits	1x61	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 87 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 61 bits RB6: 87 bits	RB5: 61 bits RB6: 87 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.7.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x61) and RB6/TF1 (1x87).

3. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.

   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

18.3.2.7a Conversational / speech / UL:(7.4, 6.7, 5.9, 4.75) DL:(7.4, 6.7, 5.9, 4.75) kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.7a.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.7a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.7a.

18.3.2.7a.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x61(alt. 1x0)	0x87	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	1x63	N/A
	TF3, bits	1x55	1x76	N/A
	TF4, bits	1x58	1x87	N/A
	TF5, bits	1x61	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7,DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF3, TF2, TF0)
UL_TFC4	(TF4, TF3, TF0)
UL_TFC5	(TF5, TF4, TF0)
UL_TFC6	(TF0, TF0, TF1)
UL_TFC7	(TF1, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1)
UL_TFC9	(TF3, TF2, TF1)
UL_TFC10	(TF4, TF3, TF1)
UL_TFC11	(TF5, TF4, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x61 (alt. 1x0)	0x87	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	1x63	N/A
	TF3, bits	1x55	1x76	N/A
	TF4, bits	1x58	1x87	N/A
	TF5, bits	1x61	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF3, TF2, TF0)
DL_TFC4	(TF4, TF3, TF0)
DL_TFC5	(TF5, TF4, TF0)
DL_TFC6	(TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1)
DL_TFC9	(TF3, TF2, TF1)
DL_TFC10	(TF4, TF3, TF1)
DL_TFC11	(TF5, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 39 bits RB6: 87 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC8	RB5: 42 bits RB6: 53 bits	RB5: 42 bits RB6: 53 bits
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC9	RB5: 55 bits RB6: 63 bits	RB5: 55 bits RB6: 63 bits
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC10	RB5: 58 bits RB6: 76 bits	RB5: 58 bits RB6: 76 bits
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 61 bits RB6: 87 bits	RB5: 61 bits RB6: 87 bits

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See clause 18.3.1.1 for test procedure.

18.3.2.7a.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53)
   - for sub-test 3: RB5/TF3 (1x55) and RB6/TF2 (1x63)
   - for sub-test 4: RB5/TF4 (1x58) and RB6/TF3 (1x76)
   - for sub-test 5: RB5/TF5 (1x61) and RB6/TF4 (1x87)
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
   - for sub-test 2 to 5: an RLC SDU on RB5 and RB6 having the same content as sent by the SS.

18.3.2.8 Conversational / speech / UL:6.7 DL:6.7 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.8.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.8.

18.3.2.8.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x58(alt. 1x0)	0x76	0x148
	TF1, bits	1x39	1x76	1x148
	TF2, bits	1x58	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x58(alt. 1x0)	0x76	0x148
	TF1, bits	1x39	1x76	1x148
	TF2, bits	1x58	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 76 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 58 bits RB6: 76 bits	RB5: 58 bits RB6: 76 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.8.4 Test requirements

See clause 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x58) and RB6/TF1 (1x76).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

18.3.2.9 Conversational / speech / UL:5.9 DL:5.9 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.9.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.9.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.9.

18.3.2.9.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x55(alt. 1x0)	0x63	0x148
	TF1, bits	1x39	1x63	1x148
	TF2, bits	1x55	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x55 (alt. 1x0)	0x63	0x148
	TF1, bits	1x39	1x63	1x148
	TF2, bits	1x55	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 63 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 55 bits RB6: 63 bits	RB5: 55 bits RB6: 63 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.9.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x55) and RB6/TF1 (1x63).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

18.3.2.10 Conversational / speech / UL:5.15 DL:5.15 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

18.3.2.10.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.10.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.10.

18.3.2.10.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x49 (alt. 1x0)	0x54	0x148
	TF1, bits	1x39	1x54	1x148
	TF2, bits	1x49	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x49 (alt. 1x0)	0x54	0x148
	TF1, bits	1x39	1x54	1x148
	TF2, bits	1x49	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 54 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 49 bits RB6: 54 bits	RB5: 49 bits RB6: 54 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.10.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x49) and RB6/TF1 (1x54).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

18.3.2.11 Conversational / speech / UL:4.75 DL:4.75 kbps / CS RAB + UL:1.7 DL:1.7 kbps SRBs for DCCH

18.3.2.11.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.11.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.11.

18.3.2.11.3 Method of test

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0x49(alt.1x0)	0x53	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF1, TF0)
UL_TFC3	(TF0, TF0, TF1)
UL_TFC4	(TF1, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	DCCH
TFS	TF0, bits	0X42 (alt.1x0)	0x53	0x148
	TF1, bits	1x39	1x53	1x148
	TF2, bits	1x42	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF1, TF0)
DL_TFC3	(TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (note 2)	Test data size (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 53 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 42 bits RB6: 53 bits	RB5: 42 bits RB6: 53 bits
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.11.4 Test requirements

See clause 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x39).
   - for sub-test 2: RB5/TF2 (1x42) and RB6/TF1 (1x53).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
   - for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

18.3.2.12 Conversational / unknown / UL:28.8 DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.12.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.12.

18.3.2.12.3 Method of test

Uplink RLC TM RLC Segmentation indication	 FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE

Uplink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

		RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.12.4 Test requirements

See clause 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.

18.3.2.13 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.13.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20ms TTI

18.3.2.13.1.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.13.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.13.

18.3.2.13.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	2x640	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	2x640	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 640	RB5: 2x640
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.13.1.4 Test requirements

See clause 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (2x640).
3. At step 15 the UE shall return
   - for sub-test 1: two RLC SDUs on RB5 having the same content as sent by SS.

18.3.2.13.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40ms TTI

18.3.2.13.2.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.13.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.13.

18.3.2.13.2.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	4x640	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	4x640	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 640	RB5: 4x640
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.3.1.1 for test procedure.

18.3.2.13.2.4 Test requirements

See clause 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (4x640).
3. At step 15 the UE shall return
   - for sub-test 1: four RLC SDUs on RB5 having the same content as sent by SS.

18.3.2.14 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.14.1 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 20ms TTI

18.3.2.14.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.14.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.14.

18.3.2.14.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Segmentation indication	 FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	1x640	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	1x640	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 640	RB5: 640
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.14.1.4 Test requirements

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x640).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.

18.3.2.14.1 Conversational / unknown / UL:32 DL:32 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40ms TTI

18.3.2.14.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.14.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.14.

18.3.2.14.1.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Segmentation indication	 FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	2x640	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x640	0x148
	TF1, bits	2x640	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 640	RB5: 2x640
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.14.1.4 Test requirements

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (2x640).
3. At step 15 the UE shall return
   - for sub-test 1: two RLC SDUs on RB5 having the same content as sent by SS.

18.3.2.15 Streaming / unknown / UL:14.4/DL:14.4 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.15.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.15.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.15.

18.3.2.15.3 Method of test

Uplink TFS:

	TFI	RB5 (14.4 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

	TFI	RB5 (14.4 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 576
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.15.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.

18.3.2.16 Streaming / unknown / UL:28.8/DL:28.8 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.16.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.16.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.16.

18.3.2.16.3 Method of test

Uplink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

		RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.16.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS.

18.3.2.17 Streaming / unknown / UL:57.6/DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.17.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.17.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.17.

18.3.2.17.3 Method of test

Initial Conditions

The following RLC Info parameter values shall be set by the SS:

Uplink RLC TM RLC Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard Segmentation indication	 100ms FALSE
Downlink RLC TM RLC Segmentation indication	 FALSE
NOTE: Timer based discard without explicit signalling is used in uplink to secure that the UE will be able to return data for the case when the UE test loop function will not deliver all the SDUs in one and the same TTI .	

Uplink TFS:

	TFI	RB5 (57.6 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A
	TF3, bits	3x576	N/A
	TF4, bits	4x576	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (57.6 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A
	TF3, bits	3x576	N/A
	TF4, bits	4x576	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5,	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 576	RB5: 2x576
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 576	RB5: 3x576
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 576	RB5: 4x576
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.17.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x576).
   - for sub-test 2: RB5/TF2 (2x576) or RB5/TF1 (1x576).
   - for sub-test 3: RB5/TF3 (3x576) or RB5/TF1 (1x576).
   - for sub-test 4: RB5/TF4 (4x576) or RB5/TF1 (1x576).
3. At step 15 the UE shall return
   - for sub-test 1: one RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 2: two RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 3: three RLC SDU on RB5 having the same content as sent by SS.
   - for sub-test 4: four RLC SDU on RB5 having the same content as sent by SS.

18.3.2.18 Void

18.3.2.19 Void

18.3.2.20 Void

18.3.2.21 Void

18.3.2.22 Void

18.3.2.23 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.23.1 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / (PS RAB payload size 320)

18.3.2.23.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.23.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23 for uplink payload size 320 case.

18.3.2.23.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (8 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312	RB5: 312
2	DL_TFC1	UL_TFC2	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.23.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
3. At step 15 the UE shall return
   - for sub-test 1 and 2: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.23.2 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / (PS RAB payload size 128)

18.3.2.23.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.23.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23 for the uplink payload size 128 case.

18.3.2.23.2.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	5x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (8 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 376	RB5: 312
2	DL_TFC1	UL_TFC2	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 312
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.23.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).

- for sub-test 2: RB5/TF2 (5x144).

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.

- for sub-test 2: an RLC SDU on RB5 having the same content as 2 times plus 8 lsb's of the DL RLC SDU sent by the SS.

18.3.2.23a Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.23a.1 Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 40 ms TTI

18.3.2.23a.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.23a.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23a, for the uplink 40 ms TT case.

18.3.2.23a.1.3 Method of test

See 18.3.1.1 for test procedure.

Uplink TFS:

	TFI	RB5 (8 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Uplink TFCS:

TFCI	(8 kbps RAB, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF0, TF1)
UL_TFC3	(TF1, TF1)

Downlink TFS:

		RB5 (8 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Downlink TFCS:

TFCI	(8 kbps RAB, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF0, TF1)
DL_TFC3	(TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2,	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 312	RB5: 312
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC2 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

18.3.2.23a.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.23a.2 Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / 80 ms TTI

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23a, for the uplink 80 ms TTI case.

See test case 18.3.2.23.2 for test procedure and test requirement.

18.3.2.23b Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.23b.1 Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 320.

18.3.2.23b.1.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.23b.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23b, for the uplink payload size 320 case.

18.3.2.23b.1.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC3,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC3 ,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23b.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1 and 2: an RLC SDU on RB5 having the same content as sent by the SS.

18.3.2.23b.2 Interactive or background / UL:16 DL:16 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 128.

18.3.2.23b.2.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.23b.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23b, for the uplink payload size 128 case.

18.3.2.23b.2.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	5x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC3,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC3 ,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23b.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (5x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as sent by the SS.

18.3.2.23c Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.23c.1 Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 320.

18.3.2.23c.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.23c.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23c the uplink payload size 320 case.

18.3.2.23c.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC5,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
For RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23c.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.23c.2 Interactive or background / UL:32 DL:32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 128.

18.3.2.23c.2.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.23c.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23c, for the uplink payload size 128 case.

18.3.2.23c.2.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	5x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC5,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, UL_TFC0 DL_TFC5 ,UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
For RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23c.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (5x144).
   - for sub-test 3: RB5/TF2 (7x144).
   - for sub-test 4: RB5/TF2 (10x144).

3. At step 15 the UE shall return

   - for sub for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 832 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4: an RLC SDU on RB5 having the same content as sent by the SS.

18.3.2.23d Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI) + UL:3.4 DL:3.4 kbps SRBs for DCCH.

18.3.2.23d.1 Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI) + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 320.

18.3.2.23d.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.23d.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23d, for the uplink payload size of 320 case.

18.3.2.23d.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC3,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC3 ,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC3 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
For RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23d.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 2: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.23d.2 Interactive or background / UL:32 DL:32 kbps / PS RAB (20 ms TTI) + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload size 128.

18.3.2.23d.2.1 Conformance requirement

See clause 18.3.2.4.1.

18.3.2.23d.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.23d, for the uplink payload size 128 case.

18.3.2.23d.2.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	5x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF0, TF1)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0 DL_TFC3,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, UL_TFC0 DL_TFC3 ,UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC3 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

See 18.3.1.1 for test procedure.

18.3.2.23d.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send a RADIO BEARER SETUP COMPLETE message.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (5x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as sent by the SS.

18.3.2.24 Void

18.3.2.25 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.25.1 Interactive or background / UL:32 DL: 64 kbps / PS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH / (PS RAB payload size 320)

18.3.2.25.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.25.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.25 for the uplink payload size of 320 case.

18.3.2.25.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 1272	RB5: 1272
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.25.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1 and 3: RB5/TF1 (1x336).
   - for sub-test 2 and 4: RB5/TF1 (2x336).

3. At step 15 the UE shall return

   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.25.2 Interactive or background / UL:32 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / (PS RAB payload 128)

18.3.2.25.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.25.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.25 for the uplink payload 128 case.

18.3.2.25.2.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	5x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF0, TF1)
UL_TFC4	(TF1, TF1)
UL_TFC5	(TF2, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 1016	RB5: 952
4	DL_TFC4	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 1272	RB5: 1272
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.25.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (5x144).
   - for sub-test 3: RB5/TF1 (1x144).
   - for sub-test 4: RB5/TF2 (5x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.26 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.26.1 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 320, Physical Configuration 1

18.3.2.26.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.26.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.26 for the uplink payload 320 case with physical configuration 1.

18.3.2.26.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.44)

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.26.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.26.2 Interactive or background / UL:64 DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 128, Physical Configuration 2

18.3.2.26.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.26.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.26 for the uplink payload 128 case with physical configuration 2.

18.3.2.26.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2784 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 760	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.26.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF3 (7x144).
   - for sub-test 4: RB5/TF4 (10x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 128 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 832 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.27 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.27.1 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 320, Physical Configuration 1

18.3.2.27.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.27.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.27 for the uplink payload 320 case with physical configuration 1.

18.3.2.27.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.44)

Downlink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.27.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 640 lsb's of the DL RLC SDU sent by the SS.

18.3.2.27.2 Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 128, Physical Configuration 2

18.3.2.27.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.27.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.27 for the uplink payload 128 case with physical configuration 2.

18.3.2.27.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2784 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 4 codes x 2 time slots + SF16 x 3 codes x 2 time slots
	Max. Number of data bits/radio frame	3848 bits
	TFCI code word	16 bits
	Puncturing limit	0.84

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 760	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.27.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF3 (7x144).
   - for sub-test 4: RB5/TF4 (10x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 128 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 512 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.28 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.28.1 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 320, Physical Configuration 1

18.3.2.28.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.28.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.28 for the uplink payload 320 case with physical configuration 1.

18.3.2.28.1.3 Method of test

Uplink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 timeslot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.44 (alt. 0.40)

Downlink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 1 time slot
	Max. Number of data bits/radio frame	2192 bits
	TFCI code word	16 bits
	Puncturing limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.28.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.28.2 Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / Payload 128, Physical Configuration 2

18.3.2.28.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.28.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.28 for the uplink payload 128 case with physical configuration 2.

18.3.2.28.2.3 Method of test

Uplink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	7x144	N/A
	TF3, bits	14x144	N/A
	TF4, bits	20x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 2 timeslots + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	5376 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 4 codes x 2 time slots + SF16 x 3 codes x 2 time slots
	Max. Number of data bits/radio frame	3848 bits
	TFCI code word	16 bits
	Puncturing limit	0.84

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 888	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.28.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (7x144).
   - for sub-test 3: RB5/TF3 (14x144).
   - for sub-test 4: RB5/TF4 (20x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 256 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 512 lsb's of the DL RLC SDU sent by the SS.

- for sub-test 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.29 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.29.1 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / Payload 320, Physical Configuration 1

18.3.2.29.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.29.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.29 for the uplink payload 320 case with physical configuration 1.

18.3.2.29.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.44)

Downlink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2872

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.29.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
   - for sub-test 5: RB5/TF3 (3x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 640 lsb's of the DL RLC SDU sent by the SS.

18.3.2.29.2 Interactive or background / UL:64 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / Payload 128, Physical Configuration 2

18.3.2.29.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.29.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.29 for the uplink payload 128 case with physical configuration 2.

18.3.2.29.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2784 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 760	RB5: 632
3	DL_TFC3	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 3576	RB5: 2872

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.29.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF4 (10x144).
   - for sub-test 4: RB5/TF4 (10x144).
   - for sub-test 5: RB5/TF3 (7x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 128 lsb's of the DL RLC SDU sent by the SS.

- for sub-test 3 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
- for sub-test 5: an RLC SDU on RB5 having the same content as 1 times plus 712 lsb's of the DL RLC SDU sent by the SS.

18.3.2.30 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.30.1 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / Payload 320, TTI 20 ms

18.3.2.30.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.30.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.30 for the uplink payload 320, TTI 20 ms case.

18.3.2.30.1.3 Method of test

Uplink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF0, TF1)
UL_TFC7	(TF1, TF1)
UL_TFC8	(TF2, TF1)
UL_TFC9	(TF3, TF1)
UL_TFC10	(TF4, TF1)
UL_TFC11	(TF5, TF1)

Downlink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 2872	RB5: 2872
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.30.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).

- for sub-test 4: RB5/TF4 (8x336).
- for sub-test 5: RB5/TF5 (9x336).

3. At step 15 the UE shall return
   - for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.30.2 Interactive or background / UL:144 DL:144 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH / Payload 128, TTI 40 ms

18.3.2.30.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.30.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.30 for the uplink payload 128, TTI 40 ms case.

18.3.2.30.2.3 Method of test

Uplink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	10x144	N/A
	TF3, bits	20x144	N/A
	TF4, bits	30x144	N/A
	TF5, bits	45x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF0, TF1)
UL_TFC7	(TF1, TF1)
UL_TFC8	(TF2, TF1)
UL_TFC9	(TF3, TF1)
UL_TFC10	(TF4, TF1)
UL_TFC11	(TF5, TF1)

Downlink TFS:

	TFI	RB5 (144 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	9x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 1272	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 2552	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 3832	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 5752	RB5: 2872
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.30.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (10x144).
   - for sub-test 3: RB5/TF3 (20x144).

- for sub-test 4: RB5/TF4 (30x144).
- for sub-test 5: RB5/TF5 (45x144).

3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 640 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 1280 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4: an RLC SDU on RB5 having the same content as 1 times plus 1280 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 5: an RLC SDU on RB5 having the same content as 1 times plus 2880 lsb's of the DL RLC SDU sent by the SS.

18.3.2.31 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.31.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH/ Payload 320, 10 ms TTI Down Link, Physical Configuration 1

18.3.2.31.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.31.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.31 for the uplink payload 320, the downlink 10 ms TTI, and physical configuration 1 case.

18.3.2.31.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.44)

Downlink TFS:

	TFI	**RB5 (256 kbps, 10ms)**	**DCCH**
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

TFCI	**(RB5, DCCH)**
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF0, TF1)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF2, TF1)
DL_TFC8	(TF3, TF1)
DL_TFC9	(TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552

NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.

See 18.3.1.1 for test procedure.

18.3.2.31.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 640 lsb's of the DL RLC SDU sent by the SS.

18.3.2.31.2 Interactive or background / UL:64 DL:256 kbps / PS RAB / Payload 128, 20 ms TTI Down Link, Physical Configuration 2

18.3.2.31.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.31.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.31 for the uplink payload 128, the downlink 20 ms TTI, and physical configuration 2 case.

18.3.2.31.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2784 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (256 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF0, TF1)
DL_TFC8	(TF1, TF1)
DL_TFC9	(TF2, TF1)
DL_TFC10	(TF3, TF1)
DL_TFC11	(TF4, TF1)
DL_TFC12	(TF5, TF1)
DL_TFC13	(TF6, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 760	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.31.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.

2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF3 (7x144).
   - for sub-test 4 to 6: RB5/TF4 (10x144).
3. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 128 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 512 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4 to 6: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.32 Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.32.1 Interactive or background / UL:64 DL:384 kbps / PS RAB / Payload 320, 10 ms TTI Down Link, Physical Configuration 1

18.3.2.32.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.32.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.32 for the uplink payload 320, the downlink 10 ms TTI, and physical configuration 1 case.

18.3.2.32.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	512 chips
	Codes and time slots	SF16 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	1148 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48 (alt. 0.44)

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.						

See 18.3.1.1 for test procedure.

18.3.2.32.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336) or RB5/TF1 (1x336).
   - for sub-test 3: RB5/TF3 (3x336) or RB5/TF1 (1x336).
   - for sub-test 4 and 5: RB5/TF4 (4x336) or RB5/TF1 (1x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 640 lsb's of the DL RLC SDU sent by the SS.

18.3.2.32.2 Interactive or background / UL:64 DL:384 kbps / PS RAB / Payload 128, 20 ms TTI Down Link, Physical Configuration 2

18.3.2.32.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.32.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.32 for the uplink payload 128, the downlink 20 ms TTI, and physical configuration 2 case.

18.3.2.32.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	512 chips
	Codes and time slots	SF2 x 1 code x 1 time slot + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	2784 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 4 time slots + SF16 x 4 codes x 1 time slot (alt. SF1 x 1 code x 3 time slots)
	Max. Number of data bits/radio frame	7712 bits (alt. 13232 bits)
	TFCI code word	16 bits
	Puncturing Limit	0.60 (alt. 1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 760	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC9, , UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.32.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF3 (7x144).
   - for sub-test 4 to 8: RB5/TF4 (10x144).
3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
- for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 128 lsb's of the DL RLC SDU sent by the SS.
- for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 512 lsb's of the DL RLC SDU sent by the SS.
- for sub-test 4 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.33 Interactive or background / UL:128 DL:384 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.3.2.33.1 Interactive or background / UL:128 DL:384 kbps / PS RAB / Payload 320, 10 ms TTI Down Link, Physical Configuration 1

18.3.2.33.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.33.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.33 for the uplink payload 320, the downlink 10 ms TTI, and physical configuration 1 case.

18.3.2.33.1.3 Method of test

Uplink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 1 timeslot
	Max. Number of data bits/radio frame	2064 bits
	TFCI code word	16 bits

	TPC	2 bits
	Puncturing Limit	0.44 (alt. 0.40)

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 3832	RB5: 3832

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE2 : See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.

See 18.3.1.1 for test procedure.

18.3.2.33.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4 and 5: RB5/TF4 (8x336).
3. At step 15 the UE shall return
   - for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.33.2 Interactive or background / UL:128 DL:384 kbps / PS RAB / Payload 128, 20 ms TTI Down Link, Physical Configuration 2

18.3.2.33.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.33.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.33 for the uplink payload 128, the downlink 20 ms TTI, and physical configuration 2 case.

18.3.2.33.2.3 Method of test

Uplink TFS:

	TFI	RB5 (128 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	7x144	N/A
	TF3, bits	14x144	N/A
	TF4, bits	20x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 2 timeslots + SF4 x 1 code x 1 time slot
	Max. Number of data bits/radio frame	5376 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 4 time slots + SF16 x 4 codes x 1 time slot (alt. SF1 x 1 code x 3 time slots)
	Max. Number of data bits/radio frame	7712 bits (alt. 13232 bits)
	TFCI code word	16 bits
	Puncturing Limit	0.60 (alt. 1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 376	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 888	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5,	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 6392
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.

See 18.3.1.1 for test procedure.

18.3.2.33.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (7x144).
   - for sub-test 3: RB5/TF3 (14x144).

- for sub-test 4 to 8: RB5/TF4 (20x144).

3. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB5 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 256 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 512 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 4, 6, and 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 5: an RLC SDU on RB5 having the same content as 1 times plus 1280 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 7: an RLC SDU on RB5 having the same content as 1 times plus 1280 lsb's of the DL RLC SDU sent by the SS.

18.3.2.34 Interactive or background / UL:384 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.34.1 Interactive or background / UL:384 DL:384 kbps / PS RAB / 10 ms TTI, Physical Configuration 1

18.3.2.34.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.34.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.34 for the 10 ms TTI, physical configuration 1 case.

18.3.2.34.1.3 Method of test

Uplink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF0, TF1)
UL_TFC7	(TF1, TF1)
UL_TFC8	(TF2, TF1)
UL_TFC9	(TF3, TF1)
UL_TFC10	(TF4, TF1)
UL_TFC11	(TF5, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 3 time slots
	Max. Number of data bits/radio frame	6480 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

Downlink TFS:

	TFI	RB5 (384 kbps, 10ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF0, TF1)
DL_TFC7	(TF1, TF1)
DL_TFC8	(TF2, TF1)
DL_TFC9	(TF3, TF1)
DL_TFC10	(TF4, TF1)
DL_TFC11	(TF5, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF16 x 8 codes x 3 time slots
	Max. Number of data bits/radio frame	6608 bits
	TFCI code word	16 bits
	Puncturing Limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 3832	RB5: 3832
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC6 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.34.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8x336).
   - for sub-test 5: RB5/TF4 (12x336).

3. At step 15 the UE shall return

   - for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.34.2 Interactive or background / UL:384 DL:384 kbps / PS RAB / 20 ms TTI, Physical Configuration 2

18.3.2.34.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.34.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.34. for the 20 ms TTI, physical configuration 2 case

18.3.2.34.2.3 Method of test

Uplink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF5, TF0)
UL_TFC6	(TF6, TF0)
UL_TFC7	(TF7, TF0)
UL_TFC8	(TF8, TF0)
UL_TFC9	(TF0, TF1)
UL_TFC10	(TF1, TF1)
UL_TFC11	(TF2, TF1)
UL_TFC12	(TF3, TF1)
UL_TFC13	(TF4, TF1)
UL_TFC14	(TF5, TF1)
UL_TFC15	(TF6, TF1)
UL_TFC16	(TF7, TF1)
UL_TFC17	(TF8, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 5 timeslots + SF4 x 1 code x 2 timeslots (alt. {SF2 x 1 code + SF4 x 1 code} x 4 timeslots)

	Max. Number of data bits/radio frame	13104 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	1

Downlink TFS:

	TFI	RB5 (384 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A
	TF5, bits	12x336	N/A
	TF6, bits	16x336	N/A
	TF7, bits	20x336	N/A
	TF8, bits	24x336	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF0, TF1)
DL_TFC10	(TF1, TF1)
DL_TFC11	(TF2, TF1)
DL_TFC12	(TF3, TF1)
DL_TFC13	(TF4, TF1)
DL_TFC14	(TF5, TF1)
DL_TFC15	(TF6, TF1)
DL_TFC16	(TF7, TF1)
DL_TFC17	(TF8, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 6 codes x 4 time slots + SF16 x 4 codes x 1 time slot (alt. SF1 x 1 code x 3 time slots)
	Max. Number of data bits/radio frame	7712 bits (alt. 13232 bits)
	TFCI code word	16 bits
	Puncturing Limit	0.60 (alt. 1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC9, UL_TFC14	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC6	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC7	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC8	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 7672	RB5: 7672
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC9 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.1 for test procedure.

18.3.2.34.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (4x336).
   - for sub-test 4: RB5/TF4 (8x336).
   - for sub-test 5: RB5/TF5 (12x336).

- for sub-test 6: RB5/TF6 (16x336).
- for sub-test 7: RB5/TF7 (20x336).
- for sub-test 8: RB5/TF8 (24x336).

3. At step 15 the UE shall return
   - for sub-test 1 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.3.2.35 Interactive or background / UL:64 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.2.35.1 Interactive or background / UL:64 DL:2048 kbps / PS RAB / Payload 320, 10 ms TTI Down Link, Physical Configuration 1

18.3.2.35.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.35.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.35 for the uplink payload 320, the downlink 10 ms TTI, and physical configuration 1 case.

18.3.2.35.1.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	31x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF0, TF1)
DL_TFC12	(TF1, TF1)
DL_TFC13	(TF2, TF1)
DL_TFC14	(TF3, TF1)
DL_TFC15	(TF4, TF1)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Physical channel parameters

DPCH Uplink		Physical Configuration 1
	Midamble	256 chips
	Codes and time slots	SF2 x 1 code x 3 time slots
	Max. Number of data bits/radio frame	6480 bits
	TFCI code word	16 bits
	TPC	2 bits
	Puncturing Limit	0.48

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472

NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs.
NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.

See 18.3.1.1 for test procedure.

18.3.2.35.1.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x336).
   - for sub-test 2: RB5/TF2 (2x336).
   - for sub-test 3: RB5/TF3 (3x336).
   - for sub-test 4 to 10: RB5/TF4 (4x336).
3. At step 15 the UE shall return
   - for sub-test 1, 2, and 4 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 320 lsb's of the DL RLC SDU sent by the SS.

18.3.2.35.2 Interactive or background / UL:64 DL:2048 kbps / PS RAB / Payload 128, 20 ms TTI Down Link, Physical Configuration 2

18.3.2.35.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.2.35.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.1.35 for the uplink payload 128, the downlink 20 ms TTI, and physical configuration 2 case.

18.3.2.35.2.3 Method of test

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x144	0x148
	TF1, bits	1x144	1x148
	TF2, bits	3x144	N/A
	TF3, bits	7x144	N/A
	TF4, bits	10x144	N/A

Uplink TFCS:

TFCI	(RB5, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A
	TF11, bits	36x656	N/A
	TF12, bits	40x656	N/A
	TF13, bits	44x656	N/A
	TF14, bits	48x656	N/A
	TF15, bits	52x656	N/A
	TF16, bits	56x656	N/A
	TF17, bits	60x656	N/A
	TF18, bits	64x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)

TFCI	(RB5, DCCH)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Physical channel parameters

DPCH Downlink		Physical Configuration 2
	Midamble	256 chips
	Codes and time slots	SF16 x 13 codes x 4 time slots + SF16 x 12 codes x 7 time slot
	Max. Number of data bits/radio frame	37520 bits (alt. 37504)
	TFCI code word	16 bits (alt. 32 bits)
	Puncturing limit	0.56

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1536	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2688	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 28152	RB5: 28152
14	DL_TFC14	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4 UL_TFC5, UL_TFC9	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 40952	RB5: 40952

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
NOTE 1: UL_TFC0, UL_TFC1, and UL_TFC5 are part of minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.3.1.1 for test procedure.

18.3.2.35.2.4 Test requirements

See 18.3.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: RB5/TF1 (1x144).
   - for sub-test 2: RB5/TF2 (3x144).
   - for sub-test 3: RB5/TF3 (7x144).
   - for sub-test 4 to 18: RB5/TF4 (10x144).
3. At step 15 the UE shall return
   - for sub-test 1, and 4 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the same content as 1 times plus 264 lsb's of the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the same content as 1 times plus 136 lsb's of the DL RLC SDU sent by the SS.

18.3.2.36 Void

18.3.2.37 Void