18.3.3 Combinations on PDSCH, SCCPCH, PUSCH and PRACH

18.3.3.1 Interactive or background / UL: 64 DL: 256 kbps / PS RAB + UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.1.1 Interactive or background / UL: 64(payload 320) DL: 256 kbps (10 ms TTI) / PS RAB + UL: 3.4/16.8 DL: 3.4/33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.1.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.1.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.1. for the uplink payload of 320 bits and downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, 16.8 kbps SHCCH and the 3.4 kbps DCCH. The Interactive/Background PS RAB on the USCH has a 320 bit Payload Size.
- The RACH channel can carry combinations of the signalling Radio Bearer for 16.8 kbps CCCH, DCCH, and SHCCH excluding or including an Interactive/Background 12.8 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB, the 16 kbps SHCCH and the 3.4 kbps DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI.
- The FACH can carry combinations of the signalling Radio Bearer for 33.6 kbps CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 32 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.1.1.3 Method of test

The contents of the System Information Block type 5 are specified in clause 8.1.2.2 with the following modifications.

- PUSCH system information	
- PUSCH Identity	1
- PUSCH info	
- TFCS ID	1
- Common timeslot info	
- 2^{nd} interleaving mode	Frame
- TFCI coding	16
- Puncturing Limit	0.40
- Repetition period	1
- Repetition length	1
- PUSCH timeslots and codes	
- Dynamic SF usage	FALSE
- First timeslot Code List	1
- Channelisation Code	As required by individual test below
- CHOISE more timeslots	As required by individual test below
- USCH TFS	As required by individual test below
- USCH TFCS	As required by individual test below

Uplink TFS for the 64 kbps USCH:

	TFI	DTCH	SHCCH (SRB#5)	DCCH (SRB#1 – SRB#4)
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	3x337	N/A	N/A
	TF4, bits	4x337	N/A	N/A

Uplink TFCS for the 64 kbps USCH:

TFCI	(DTCH, SHCCH, DCCH)
UL_USCH_TFC0	(TF0, TF0, TF0)
UL_USCH_TFC1	(TF1, TF0, TF0)
UL_USCH_TFC2	(TF2, TF0, TF0)
UL_USCH_TFC3	(TF3, TF0, TF0)
UL_USCH_TFC4	(TF4, TF0, TF0)
UL_USCH_TFC5	(TF0, TF1, TF0)
UL_USCH_TFC6	(TF1, TF1, TF0)
UL_USCH_TFC7	(TF2, TF1, TF0)
UL_USCH_TFC8	(TF3, TF1, TF0)
UL_USCH_TFC9	(TF4, TF1, TF0)
UL_USCH_TFC10	(TF0, TF0, TF1)
UL_USCH_TFC11	(TF1, TF0, TF1)
UL_USCH_TFC12	(TF2, TF0, TF1)
UL_USCH_TFC13	(TF3, TF0, TF1)
UL_USCH_TFC14	(TF4, TF0, TF1)
UL_USCH_TFC15	(TF0, TF1, TF1)
UL_USCH_TFC16	(TF1, TF1, TF1)
UL_USCH_TFC17	(TF2, TF1, TF1)
UL_USCH_TFC18	(TF3, TF1, TF1)
UL_USCH_TFC19	(TF4, TF1, TF1)

Uplink TFS for the RACH without DTCH:

	TFI	CCCH (SRB#0)	DCCH (SRB#1 – SRB#5)	SHCCH (SRB#5)
TFS	TF0, bits	1x170	1x170	1x170

Uplink TFCS for the RACH without DTCH:

TFCI	(CCCH, DCCH, SHCCH)
UL_RACH_TFC0	(TF0)

Uplink TFS for the RACH with DTCH:

	TFI	DTCH (20 ms TTI)	CCCH (SRB#0)	DCCH (SRB#1 – SRB#4)	SHCCH (SRB#5)
TFS	TF0, bits	1x170	1x170	1x170	1x170

Uplink TFCS for the RACH with DTCH:

TFCI	(DTCH, CCCH, DCCH, SHCCH)
UL_RACH_DTCH_ TFC0	(TF0)

Downlink TFS for 256 kbps DSCH:

	TFI	DTCH(256kbps)	SHCCH SRB#5	DCCH SRB#1-#4
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	4x337	N/A	N/A
	TF4, bits	8x337	N/A	N/A

Downlink TFCS for the 256 kbps DSCH:

TFCI	DTCH, SHCCH, DCCH
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF0, TF1, TF0),
DL_DSCH_TFC6	(TF1, TF1, TF0),
DL_DSCH_TFC7	(TF2, TF1, TF0),
DL_DSCH_TFC8	(TF3, TF1, TF0),
DL_DSCH_TFC9	(TF4, TF1, TF0),
DL_DSCH_TFC10	(TF0, TF0, TF1),
DL_DSCH_TFC11	(TF1, TF0, TF1),
DL_DSCH_TFC12	(TF2, TF0, TF1),
DL_DSCH_TFC13	(TF3, TF0, TF1),
DL_DSCH_TFC14	(TF4, TF0, TF1),
DL_DSCH_TFC15	(TF0, TF1, TF1),
DL_DSCH_TFC16	(TF1, TF1, TF1),
DL_DSCH_TFC17	(TF2, TF1, TF1),
DL_DSCH_TFC18	(TF3, TF1, TF1),
DL_DSCH_TFC19	(TF4, TF1, TF1)

Downlink TFS for FACH without DTCH:

	TFI	CCCH/DCCH/SHCCH/BCCH
TFS	TF0, bits	0x171
	TF1, bits	1x171
	TF2, bits	2x171
	TF3, bits	3x171
	TF4 ,bits	4x171

Downlink TFCS for FACH without DTCH:

TFCI	CCCH/DCCH/SHCCH/BCCH
DL_FACH_TFC0	TF0
DL_ FACH_TFC1	TF1
DL_ FACH_TFC2	TF2
DL_ FACH_TFC3	TF3
DL_ FACH_TFC4	TF4

Downlink TFS for FACH with DTCH:

	TFI	DTCH/CCCH/DCCH/SHCCH/BCCH
TFS	TF0, bits	0x171
	TF1, bits	1x171
	TF2, bits	2x171
	TF3, bits	1x363
	TF4 ,bits	3x171
	TF5, bits	4x171
	TF6, bits	2x363

Downlink TFCS for FACH with DTCH:

TFCI	DTCH/CCCH/DCCH/SHCCH/BCCH
DL_FACH_TFC0_DTCH	TF0
DL_FACH_TFC1_DTCH	TF1
DL_FACH_TFC2_DTCH	TF2
DL_FACH_TFC3_DTCH	TF3
DL_FACH_TFC4_DTCH	TF4
DL_FACH_TFC5_DTCH	TF5
DL_FACH_TFC6_DTCH	TF6

Sub-tests for RACH/FACH:

See Section 18.3.6.1

Sub-tests – USCH & DSCH:

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)

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 312	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 632	DTCH: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1912	DTCH: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552	DTCH: 2552
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10, UL_TFC11, and UL_TFC15 are part of the minimum set of TFCIs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.1.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH/TF2 (2x337).
   - for sub-test 3: DTCH/TF3 (3x337).
   - for sub-test 4: DTCH/TF4 (4x337).
4. At step 15 the UE shall return
   - for sub-test 1, 2, and 4: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

- for sub-test 3: an RLC SDU on DTCH having the first 1272 bits equal to the content as the DL RLC SDU sent by the SS in the downlink.

18.3.3.1.2 Interactive or background / UL: 64(145 bit TBS – 20 ms TTI) DL: 256 kbps (337 bit TBS – 10 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.1.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.1.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.1 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.

- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).

- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 256 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.1.2.3 Method of test

Uplink TFS for the 64 kbps USCH – 145 bit TBS & 20 ms TTI:

	TFI	**DTCH**	**SHCCH (SRB#5)**	**DCCH (SRB#1 – SRB#4)**
TFS	TF0, bits	0x145	0x169	0x149
	TF1, bits	1x145	1x169	1x149
	TF2, bits	3x145	N/A	N/A
	TF3, bits	7x145	N/A	N/A
	TF4, bits	10x145	N/A	N/A

Uplink TFCS for the 64 kbps USCH – 145 bit TBS & 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 256 kbps DSCH – 10 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for 256 kbps DSCH - 10 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests – USCH (337 bit TBS & 20 ms TTI) & DSCH (337 bit TBS & 10 ms TTI):

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)

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 376 (128x1)x3 - 8	DTCH: 312 (320 x 1) - 8
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 760 (128x3)x2 - 8	DTCH: 632 (320 x 2) - 8
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1784 (7x128) x 2 - 8	DTCH: 1272 (4 x 320) - 8
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552 (10x128) x 2 - 8	DTCH: 2552 (8 x 320) - 8
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the minimum set of TFCIs NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.1.2.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

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

2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST

3. At step 15 the UE transmitted transport format shall be

   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH/TF2 (3x145).
   - for sub-test 3: DTCH/TF3 (7x145).
   - for sub-test 4: DTCH/TF4 (10x145).

4. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on DTCH having the first 312 bits equal to the content of the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on DTCH having the first 632 bits equal to the content of the DL RLC SDU sent by the SS.

- for sub-test 3: an RLC SDU on DTCH having the first 1272 bits equal to the content of the DL RLC SDU sent by the SS.
- for sub-test 4: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS

18.3.3.1.3 Interactive or background / UL: 64(337 bit TBS – 20 ms TTI) DL: 256 kbps (337 bit TBS – 20 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.1.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.1.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.1 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the 256 kbps Interactive/Background PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 256 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.1.3.3 Method of test

Uplink TFS for the 64 kbps USCH – 337 bit TBS & 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Uplink TFS for the 64 kbps USCH – 337 bit TBS & 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in Section 18.3.3.1.1.3

Uplink TFCS for the RACH without DTCH:

See corresponding table in Section 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in Section 18.3.3.1.1.3

Uplink TFCS for the RACH with DTCH:

See corresponding table in Section 18.3.3.1.1.3

Downlink TFS for 256 kbps DSCH – 337 bit TBS & 20 ms TTI:

	TFI	DTCH(256kbps)	SHCCH SRB#5	DCCH SRB#1-#4
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	4x337	N/A	N/A
	TF4, bits	8x337	N/A	N/A
	TF5, bits	12x337	N/A	N/A
	TF6, bits	16x337	N/A	N/A

Downlink TFS for 256 kbps DSCH – 337 bit TBS & 20 ms TTI:

TFCI	DTCH, SHCCH, DCCH
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF5, TF0, TF0),
DL_DSCH_TFC6	(TF6, TF0, TF0),
DL_DSCH_TFC7	(TF0, TF1, TF0),
DL_DSCH_TFC8	(TF1, TF1, TF0),
DL_DSCH_TFC9	(TF2, TF1, TF0),
DL_DSCH_TFC10	(TF3, TF1, TF0),
DL_DSCH_TFC11	(TF4, TF1, TF0),
DL_DSCH_TFC12	(TF5, TF1, TF0),
DL_DSCH_TFC13	(TF6, TF1, TF0),
DL_DSCH_TFC14	(TF0, TF0, TF1),
DL_DSCH_TFC15	(TF1, TF0, TF1),
DL_DSCH_TFC16	(TF2, TF0, TF1),
DL_DSCH_TFC17	(TF3, TF0, TF1),
DL_DSCH_TFC18	(TF4, TF0, TF1),
DL_DSCH_TFC19	(TF5, TF0, TF1),
DL_DSCH_TFC20	(TF6, TF0, TF1),
DL_DSCH_TFC21	(TF0, TF1, TF1),
DL_DSCH_TFC22	(TF1, TF1, TF1),
DL_DSCH_TFC23	(TF2, TF1, TF1),
DL_DSCH_TFC24	(TF3, TF1, TF1),
DL_DSCH_TFC25	(TF4, TF1, TF1),
DL_DSCH_TFC26	(TF5, TF1, TF1),
DL_DSCH_TFC27	(TF6, TF1, TF1)

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in Section 18.3.3.1.1.3

Sub-tests for RACH/FACH – 20 ms TTI:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 20 ms TTI & UL TBS (337 bit) and DL TBS (337 bit):

Sub-tests – USCH (337 bit TBS & 20 ms TTI) & DSCH (337 bit TBS & 20 ms TTI):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 312 (1 x 320) - 8	DTCH: 312 (1 x 320) - 8
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 632 (2 x 320) - 8	DTCH: 632 (1 x 320) - 8
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1912 (3 x 320) - 8	DTCH: 1272 (4 x 320) - 8
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552 (4 x 320) x 2 - 8	DTCH: 2552 (8 x 320) - 8
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 3832 (4 x 320) x 3 - 8	DTCH: 3832 (12 x 320) - 8
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (4 x 320) x 4 - 8	DTCH: 5112 (16 x 320) - 8
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.2.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

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

2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST

3. At step 15 the UE transmitted transport format shall be

   - for sub-test 1: DTCH/TF1 (1x337).

   - for sub-test 2: DTCH/TF2 (2x337).

   - for sub-test 3: DTCH/TF3 (3x337).

   - for sub-test 4, 5, and 6: DTCH/TF4 (4x337).

4. At step 15 the UE shall return

   - for sub-test 1, 2, 4, 5, and 6: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

   - for sub-test 3: an RLC SDU on DTCH having the first 1272 bits equal content as the DL RLC SDU sent by the SS.

18.3.3.1.4 Interactive or background / UL: 64(145 bit TBS – 20 ms TTI) DL: 256 kbps (337 bit TBS – 20 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH 64 kbps + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.1.4.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.1.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.1 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.

- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the 256 kbps Interactive/Background PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).

- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 256 kbps PS RAB.

- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.1.4.3 Method of test

Uplink TFS for the 64 kbps USCH – 145 bit TBS & 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – 145 bit TBS & 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 256 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.1.3.2

Downlink TFCS for the 256 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.1.3.2

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests – USCH (145 bit TBS & 20 ms TTI) & DSCH (337 bit TBS & 10 ms TTI):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 376 (128 x 1)x3 - 8	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 760 (128 x 3) x 2 - 8	DTCH: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1784 (7x128) x 2 - 8	DTCH: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19,	DTCH: 2552 (10x128) x 2 - 8	DTCH: 2552
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 3832 (10x128) x 3 - 8	DTCH: 3832 (12 x 320) - 8
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (10x128) x 4 - 8	DTCH: 5112 (16 x 320) - 8

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.1.4.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

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

2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST.

3. At step 15 the UE transmitted transport format shall be

   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH/TF2 (3x145).
   - for sub-test 3: DTCH/TF3 (7x145).
   - for sub-test 4, 5 and 6: DTCH/TF4 (10x145).

4. At step 15 the UE shall return

   - for sub-test 4 to 6: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 1: an RLC SDU on DTCH having the first **312** bits equal content as the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on DTCH having the first **632** bits equal content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on DTCH having the first 1272 bits equal content as the DL RLC SDU sent by the SS.

18.3.3.2 Interactive or background / UL: 64 DL: 384 kbps / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.2.1 Interactive or background / UL: 64(337 bit TBS – 20 ms TTI) DL: 384 kbps (337 bit TBS – 10 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.2.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.2.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.2 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB, the SHCCH and the DCC. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).

- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.2.1.3 Method of Test

Uplink TFS for the 64 kbps USCH – 337 bit TBS & 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the 64 kbps USCH – 337 bit TBS & 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 384 kbps DSCH – 337 bit TBS & 10 ms TTI:

	TFI	**DTCH(384 kbps)**	**SHCCH SRB#5**	**DCCH SRB#1-#4**
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	4x337	N/A	N/A
	TF4, bits	8x337	N/A	N/A
	TF5, bits	12x337	N/A	N/A

Downlink TFS for 384 kbps DSCH – 337 bit TBS & 10 ms TTI:

TFCI	**DTCH,SHCCH,DCCH**
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF5, TF0, TF0),
DL_DSCH_TFC6	(TF0, TF1, TF0),
DL_DSCH_TFC7	(TF1, TF1, TF0),
DL_DSCH_TFC8	(TF2, TF1, TF0),
DL_DSCH_TFC9	(TF3, TF1, TF0),
DL_DSCH_TFC10	(TF4, TF1, TF0),
DL_DSCH_TFC11	(TF5, TF1, TF0),
DL_DSCH_TFC12	(TF0, TF0, TF1),
DL_DSCH_TFC13	(TF1, TF0, TF1),
DL_DSCH_TFC14	(TF2, TF0, TF1),
DL_DSCH_TFC15	(TF3, TF0, TF1),
DL_DSCH_TFC16	(TF4, TF0, TF1),
DL_DSCH_TFC17	(TF5, TF0, TF1),
DL_DSCH_TFC18	(TF0, TF1, TF1),
DL_DSCH_TFC19	(TF1, TF1, TF1),
DL_DSCH_TFC20	(TF2, TF1, TF1),
DL_DSCH_TFC21	(TF3, TF1, TF1),
DL_DSCH_TFC22	(TF4, TF1, TF1)
DL_DSCH_TFC23	(TF5, TF1, TF1)

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-tests for RACH/FACH – 20 ms TTI:

See Section 18.3.6.1

Sub-tests – USCH (337 bit TBS & 20 ms TTI) & DSCH (337 bit TBS & 10 ms TTI):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 312 (1x320)x1 - 8	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 632 (2x320)x1 - 8	DTCH: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1912 (3 x 320) x 2 - 8	DTCH: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552 (4 x 320) x 2 - 8	DTCH: 2552
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	RB5: 3832 (4 x 320) x 3 - 8	RB5: 3832
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.2.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH /TF2 (2x337).
   - for sub-test 3: DTCH /TF3 (3x337).
   - for sub-test 4 and 5: DTCH /TF4 (4x337)
4. At step 15 the UE shall return
   - for sub-test 1, 2, 4, 5: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the DL RLC SDU sent by the SS

18.3.3.2.2 Interactive or background / UL: 64(145 bit TBS – 20 ms TTI) DL: 384 kbps / PS RAB/10 ms TTI/145 bits TBS (337 bit TBS – 10 ms TTI) + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.2.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.2.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.2 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH, and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.
- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.2.2.3 Method of test

Uplink TFS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

U plink TFCS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for the 384 kbps DSCH – 10 ms TTI:

See corresponding table in 18.3.3.2.1.3

Downlink TFCS for the 384 kbps DSCH - 10 ms TTI:

See corresponding table in 18.3.3.2.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-tests for RACH/FACH – 20 ms TTI:

See Section 18.3.6.1

Sub-tests for USCH/DSCH – 10 ms TTI & UL 145 bit TBS and DL 337 bit TBS:

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 376 (1x128)x3 - 8	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 760 (3x128)x2 - 8	DTCH: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1784 (7x128)x2 - 8	DTCH: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552 (10x128)x2 - 8	DTCH: 2552
5	DL_DSCH_TFC5	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, DL_DSCH_TFC12, DL_DSCH_TFC18, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	RB5: 3832 (3x128)x10 - 8	RB5: 3832

NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.2.2.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x145).

- for sub-test 2: DTCH /TF2 (3x145).
- for sub-test 3: DTCH /TF3 (7x145).
- for sub-test 4: RB5/TF4 (10x145)

4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB5 having the first 312 bits equal to the content of the DL RLC SDU sent by the SS
   - for sub-test 2: an RLC SDU on RB5 having the first 632 bits equal to the content of the DL RLC SDU sent by the SS
   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the DL RLC SDU sent by the SS
   - for sub-tests 4, 5: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.2.3 Interactive or background / UL: 64 (337 bit TBS – 20 ms TTI) DL: 384 kbps (337 bit TBS – 20 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.2.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.2.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.2 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.
- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.2.3.3 Method of Test

See 18.3.1.3 for test procedure

Uplink TFS for the 64 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for the 384 kbps DSCH – 20 ms TTI:

	TFI	DTCH(384 kbps)	SHCCH SRB#5	DCCH SRB#1-#4
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	4x337	N/A	N/A
	TF4, bits	8x337	N/A	N/A
	TF5, bits	12x337	N/A	N/A
	TF6, bits	16x337	N/A	N/A
	TF7, bits	20x337	N/A	N/A
	TF8, bits	24x337	N/A	N/A

Downlink TFCS for the 384 kbps DSCH - 20 ms TTI:

TFCI	DTCH
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF5, TF0, TF0),
DL_DSCH_TFC6	(TF6, TF0, TF0),
DL_DSCH_TFC7	(TF7, TF0, TF0),
DL_DSCH_TFC8	(TF8, TF0, TF0),
DL_DSCH_TFC9	(TF0, TF1, TF0),
DL_DSCH_TFC10	(TF1, TF1, TF0),
DL_DSCH_TFC11	(TF2, TF1, TF0),
DL_DSCH_TFC12	(TF3, TF1, TF0),
DL_DSCH_TFC13	(TF4, TF1, TF0),
DL_DSCH_TFC14	(TF5, TF1, TF0),
DL_DSCH_TFC15	(TF6, TF1, TF0),
DL_DSCH_TFC16	(TF7, TF1, TF0),
DL_DSCH_TFC17	(TF8, TF1, TF0),
DL_DSCH_TFC18	(TF0, TF0, TF1),
DL_DSCH_TFC19	(TF1, TF0, TF1),
DL_DSCH_TFC20	(TF2, TF0, TF1),
DL_DSCH_TFC21	(TF3, TF0, TF1),
DL_DSCH_TFC22	(TF4, TF0, TF1),
DL_DSCH_TFC23	(TF5, TF0, TF1),
DL_DSCH_TFC24	(TF6, TF0, TF1),
DL_DSCH_TFC25	(TF7, TF0, TF1),
DL_DSCH_TFC26	(TF8, TF0, TF1),
DL_DSCH_TFC27	(TF0, TF1, TF1),
DL_DSCH_TFC28	(TF1, TF1, TF1),
DL_DSCH_TFC29	(TF2, TF1, TF1),
DL_DSCH_TFC30	(TF3, TF1, TF1),
DL_DSCH_TFC31	(TF4, TF1, TF1),
DL_DSCH_TFC32	(TF5, TF1, TF1),
DL_DSCH_TFC33	(TF6, TF1, TF1)
DL_DSCH_TFC34	(TF7, TF1, TF1)
DL_DSCH_TFC35	(TF8, TF1, TF1)

Downlink TFS for FACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-tests for RACH/FACH – 20 ms TTI:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 20 ms TTI & UL TBS (337 bit) and DL TBS (337 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6 UL_USCH_TFC10 UL_USCH_TFC11 UL_USCH_TFC15 UL_USCH_TFC16	DTCH: 312	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7 UL_USCH_TFC10 UL_USCH_TFC12 UL_USCH_TFC15 UL_USCH_TFC17	RB5: 632	RB5: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8 UL_USCH_TFC10 UL_USCH_TFC13 UL_USCH_TFC15 UL_USCH_TFC18	RB5: 1912 (3x320) x 2 - 8	RB5: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_USCH_TFC10 UL_USCH_TFC14 UL_USCH_TFC15 UL_USCH_TFC19	RB5: 2552	RB5: 2552
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_USCH_TFC10 UL_USCH_TFC14 UL_USCH_TFC15 UL_USCH_TFC19	RB5: 3832	RB5: 3832
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9 DL_DSCH_TFC18 DL_DSCH_TFC27 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10 UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_USCH_TFC10 UL_USCH_TFC14 UL_USCH_TFC15 UL_USCH_TFC19	RB5: 5112	RB5: 5112
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, DL_DSCH_TFC18, DL_DSCH_TFC27, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	RB5: 6392	RB5: 6392

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)
8	DL_DSCH_TFC8	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, DL_DSCH_TFC10, DL_DSCH_TFC15, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	RB5: 6392	RB5: 6392
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.2.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH /TF2 (2x337).
   - for sub-test 3: DTCH /TF3 (3x337).
   - for sub-test 4, 5, 6, 7, and 8: DTCH /TF4 (4x337)
4. At step 15 the UE shall return
   - for sub-test 1, 2, 4, 5, 7 and 8: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the DL RLC SDU sent by the SS

18.3.3.2.4 Interactive or background / UL: 64 (145 bit TBS – 20 ms TTI) DL: 384 kbps (337 bit TBS – 20 ms TTI) / PS RAB+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.2.4.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.2.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.1 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the 384 kbps Interactive/Background PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.
- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.2.4.3 Method of test

Uplink TFCS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for the 384 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.1.3.2

Downlink TFCS for the 384 kbps DSCH - 20 ms TTI:

See corresponding table in 18.3.3.1.3.2

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 20 ms TTI & UL TBS (145 bit) and DL TBS (337 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 376 (1x128)x3 - 8	DTCH: 312
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 760 (3x128)x2 - 8	DTCH: 632
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 1784 (7x128)x2 - 8	DTCH: 1272
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 2552 (10x128)x2 - 8	DTCH: 2552
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 3832 (10x128)x3 - 8	DTCH: 3832
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (10x128)x4 - 8	DTCH: 5112
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 6392 (10x128)x5 - 8	DTCH: 6392

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)
8	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, DL_DSCH_TFC14, DL_DSCH_TFC21, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 7672 (10x128)x6 - 8	DTCH: 7672
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the 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: 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 18.3.1.3 for test procedure.

18.3.3.2.4.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH/TF2 (3x145).
   - for sub-test 3: DTCH/TF3 (7x145).
   - for sub-test 4, 5, 6, 7, and 8: DTCH/TF4 (10x145).
4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on DTCH having the first 312 bits equal content as the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on DTCH having the first 632 bits equal content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on DTCH having the first 1272 bits equal content as the DL RLC SDU sent by the SS.
   - for sub-test 4,5,6,7 and 8: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.3 Interactive or background / UL: 64 DL: 2048 kbps/ PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.3.1 Interactive or background / UL: 64 (337 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 10 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.3.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.3.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.3 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 2048 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 2048 kbps PS RAB.
- To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.3.1.3 Method of test

Uplink TFS for the 64 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 2048 kbps DSCH – 10 ms TTI:

	TFI	DTCH(2048 kbps)	SHCCH SRB#5	DCCH SRB#1-#4
TFS	TF0, bits	0x657	0x169	0x149
	TF1, bits	1x657	1x169	1x149
	TF2, bits	2x657	N/A	N/A
	TF3, bits	4x657	N/A	N/A

	TF4, bits	8x657	N/A	N/A
	TF5, bits	12x657	N/A	N/A
	TF6, bits	16x657	N/A	N/A
	TF7, bits	20x657	N/A	N/A
	TF8, bits	24x657	N/A	N/A
	TF9, bits	28x657	N/A	N/A
	TF10, bits	30x657	N/A	N/A

Downlink TFCS for 2048 kbps DSCH - 10 ms TTI:

TFCI	DTCH,SHCCH,DCCH
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF5, TF0, TF0),
DL_DSCH_TFC6	(TF6, TF0, TF0),
DL_DSCH_TFC7	(TF7, TF0, TF0),
DL_DSCH_TFC8	(TF8, TF0, TF0),
DL_DSCH_TFC9	(TF9, TF0, TF0),
DL_DSCH_TFC10	(TF10, TF0, TF0),
DL_DSCH_TFC11	(TF0, TF1, TF0),
DL_DSCH_TFC12	(TF1, TF1, TF0),
DL_DSCH_TFC13	(TF2, TF1, TF0),
DL_DSCH_TFC14	(TF3, TF1, TF0),
DL_DSCH_TFC15	(TF4, TF1, TF0),
DL_DSCH_TFC16	(TF5, TF1, TF0),
DL_DSCH_TFC17	(TF6, TF1, TF0),
DL_DSCH_TFC18	(TF7, TF1, TF0),
DL_DSCH_TFC19	(TF8, TF1, TF0),
DL_DSCH_TFC20	(TF9, TF1, TF0),
DL_DSCH_TFC21	(TF0, TF0, TF1),
DL_DSCH_TFC22	(TF1, TF0, TF1),
DL_DSCH_TFC23	(TF2, TF0, TF1),
DL_DSCH_TFC24	(TF3, TF0, TF1),
DL_DSCH_TFC25	(TF4, TF0, TF1),
DL_DSCH_TFC26	(TF5, TF0, TF1),
DL_DSCH_TFC27	(TF6, TF0, TF1),
DL_DSCH_TFC28	(TF7, TF0, TF1),
DL_DSCH_TFC29	(TF8, TF0, TF1),
DL_DSCH_TFC30	(TF9, TF0, TF1),
DL_DSCH_TFC31	(TF0, TF1, TF1),
DL_DSCH_TFC32	(TF1, TF1, TF1),
DL_DSCH_TFC33	(TF2, TF1, TF1),
DL_DSCH_TFC34	(TF3, TF1, TF1),
DL_DSCH_TFC35	(TF4, TF1, TF1),
DL_DSCH_TFC36	(TF5, TF1, TF1),
DL_DSCH_TFC37	(TF6, TF1, TF1),
DL_DSCH_TFC38	(TF7, TF1, TF1),
DL_DSCH_TFC39	(TF8, TF1, TF1),
DL_DSCH_TFC40	(TF9, TF1, TF1),

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL TBS (337 bit) and DL TBS (657 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 632 (320 x1) x 2 - 8	RB5: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 1272 (320 x2) x2 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 2872 (320 x3) x3 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (320 x4) x4 - 8	DTCH: 5112

5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 7672 (320 x4) x6 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 10232 (320 x4) x8 - 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 12792 (320 x4) x10 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 15352 (320 x4) x12 - 8	DTCH: 15352
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 17912 (320 x4) x14 - 8	DTCH: 17912

10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 20472 (320 x4) x16 - 8	DTCH: 20472
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the minimum set of TFCIs NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.3.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH/TF2 (2x337).
   - for sub-test 3: DTCH/TF3 (3x337).
   - for sub-test 4 to 10: DTCH/TF4 (4x337)
3. At step 15 the UE shall return
   - for sub-test 1, 2, 4 to 10: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on DTCH having the first 2552 bits equal to the content of the DL RLC SDU sent by the SS.

18.3.3.3.2 Interactive or background / UL: 64(145 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 10 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.3.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.3.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.2 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 256 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.2.3.3 Method of test

Uplink TFS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for DSCH – 10 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFCS for DSCH - 10 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFS for FACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-tests for RACH/FACH – 20 ms TTI:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL TBS (145 bit) and DL TBS (657 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 632 (128 x1) x5 - 8	RB5: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 1528 (128 x3) x4 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18,	DTCH: 2680 (128 x7) x3 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (128 x10) x4 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_SCH_TFC19	DTCH: 7672 (128 x10) x6- 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 10232 (128 x10) x8- 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 12792 (128 x10)x10- 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11,	UL_USCH_TFC0, UL_USCH_TFC1,	DTCH: 15352	DTCH: 15352

			DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	(128 x10)x12- 8	
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 17912 (128 x10)x14- 8	DTCH: 17912
10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, DL_DSCH_TFC21, DL_DSCH_TFC31, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 20472 (128 x10)x16- 8	DTCH: 20472
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the minimum set of TFCIs NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.2.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH /TF2 (3x145).
   - for sub-test 3: DTCH /TF3 (7x145).
   - for sub-test 4 to 10: DTCH /TF4 (10x145)
4. At step 15 the UE shall return
   - for sub-test 1, 4, 5, 6, 7, 8, 9, and 10: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on RB5 having the first 1272 bits equal to the content of the DL RLC SDU sent by the SS
   - for sub-test 3: an RLC SDU on RB5 having the first 2552 bits equal to the content of the DL RLC SDU sent by the SS

18.3.3.3.3 Interactive or background / UL: 64 (337 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 20 ms TTI) / PS RAB+ UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.3.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.3.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.3 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 2048 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 2048 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.3.3.3 Method of test

Uplink TFS for the USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the USCH – Transport Block Size 337 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 2048 kbps DSCH – 20 ms TTI:

	TFI	DTCH(2048 kbps)	SHCCH SRB#5	DCCH SRB#1-#4
TFS	TF0, bits	0x657	0x169	0x149
	TF1, bits	1x657	1x169	1x149
	TF2, bits	2x657	N/A	N/A
	TF3, bits	4x657	N/A	N/A
	TF4, bits	8x657	N/A	N/A
	TF5, bits	12x657	N/A	N/A
	TF6, bits	16x657	N/A	N/A
	TF7, bits	20x657	N/A	N/A
	TF8, bits	24x657	N/A	N/A
	TF9, bits	28x657	N/A	N/A
	TF10, bits	32x657	N/A	N/A
	TF11, bits	36x657	N/A	N/A
	TF12, bits	40x657	N/A	N/A
	TF13, bits	44x657	N/A	N/A
	TF14, bits	48x657	N/A	N/A
	TF15, bits	52x657	N/A	N/A
	TF16, bits	56x657	N/A	N/A
	TF17, bits	60x657	N/A	N/A
	TF18, bits	64x657	N/A	N/A

Downlink TFCS for 2048 kbps DSCH - 20 ms TTI:

TFCI	DTCH,SHCCH,DCCH
DL_DSCH_TFC0	(TF0, TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0, TF0),
DL_DSCH_TFC2	(TF2, TF0, TF0),
DL_DSCH_TFC3	(TF3, TF0, TF0),
DL_DSCH_TFC4	(TF4, TF0, TF0),
DL_DSCH_TFC5	(TF5, TF0, TF0),
DL_DSCH_TFC6	(TF6, TF0, TF0),
DL_DSCH_TFC7	(TF7, TF0, TF0),
DL_DSCH_TFC8	(TF8, TF0, TF0),
DL_DSCH_TFC9	(TF9, TF0, TF0),
DL_DSCH_TFC10	(TF10, TF0, TF0),
DL_DSCH_TFC11	(TF11, TF0, TF0),
DL_DSCH_TFC12	(TF12, TF0, TF0),
DL_DSCH_TFC13	(TF13, TF0, TF0),
DL_DSCH_TFC14	(TF14, TF0, TF0),
DL_DSCH_TFC15	(TF15, TF0, TF0),
DL_DSCH_TFC16	(TF16, TF0, TF0),
DL_DSCH_TFC17	(TF17, TF0, TF0),
DL_DSCH_TFC18	(TF18, TF0, TF0),
DL_DSCH_TFC19	(TF0, TF1, TF0),
DL_DSCH_TFC20	(TF1, TF1, TF0),
DL_DSCH_TFC21	(TF2, TF1, TF0),
DL_DSCH_TFC22	(TF3, TF1, TF0),
DL_DSCH_TFC23	(TF4, TF1, TF0),
DL_DSCH_TFC24	(TF5, TF1, TF0),
DL_DSCH_TFC25	(TF6, TF1, TF0),
DL_DSCH_TFC26	(TF7, TF1, TF0),
DL_DSCH_TFC27	(TF8, TF1, TF0),
DL_DSCH_TFC28	(TF9, TF1, TF0),
DL_DSCH_TFC29	(TF10, TF1, TF0),
DL_DSCH_TFC30	(TF11, TF1, TF0),
DL_DSCH_TFC31	(TF12, TF1, TF0),
DL_DSCH_TFC32	(TF13, TF1, TF0),
DL_DSCH_TFC33	(TF14, TF1, TF0),
DL_DSCH_TFC34	(TF15, TF1, TF0),
DL_DSCH_TFC35	(TF16, TF1, TF0),
DL_DSCH_TFC36	(TF17, TF1, TF0),
DL_DSCH_TFC37	(TF18, TF1, TF0),
DL_DSCH_TFC38	(TF0, TF0, TF1),
DL_DSCH_TFC39	(TF1, TF0, TF1),
DL_DSCH_TFC40	(TF2, TF0, TF1),
DL_DSCH_TFC41	(TF3, TF0, TF1),
DL_DSCH_TFC42	(TF4, TF0, TF1),
DL_DSCH_TFC43	(TF5, TF0, TF1),
DL_DSCH_TFC44	(TF6, TF0, TF1),
DL_DSCH_TFC45	(TF7, TF0, TF1),
DL_DSCH_TFC46	(TF8, TF0, TF1),
DL_DSCH_TFC47	(TF9, TF0, TF1),
DL_DSCH_TFC48	(TF10, TF0, TF1),
DL_DSCH_TFC49	(TF11, TF0, TF1),
DL_DSCH_TFC50	(TF12, TF0, TF1),
DL_DSCH_TFC51	(TF13, TF0, TF1),
DL_DSCH_TFC52	(TF14, TF0, TF1),
DL_DSCH_TFC53	(TF15, TF0, TF1),
DL_DSCH_TFC54	(TF16, TF0, TF1),
DL_DSCH_TFC55	(TF17, TF0, TF1),
DL_DSCH_TFC56	(TF18, TF0, TF1),
DL_DSCH_TFC57	(TF0, TF1, TF1),
DL_DSCH_TFC58	(TF1, TF1, TF1),
DL_DSCH_TFC59	(TF2, TF1, TF1),
DL_DSCH_TFC61	(TF3, TF1, TF1),
DL_DSCH_TFC62	(TF4, TF1, TF1),
DL_DSCH_TFC63	(TF5, TF1, TF1),

DL_DSCH_TFC64	(TF6, TF1, TF1),
DL_DSCH_TFC65	(TF7, TF1, TF1),
DL_DSCH_TFC66	(TF8, TF1, TF1),
DL_DSCH_TFC67	(TF9, TF1, TF1),
DL_DSCH_TFC68	(TF10, TF1, TF1),
DL_DSCH_TFC69	(TF11, TF1, TF1),
DL_DSCH_TFC70	(TF12, TF1, TF1),
DL_DSCH_TFC71	(TF13, TF1, TF1),
DL_DSCH_TFC72	(TF14, TF1, TF1),
DL_DSCH_TFC73	(TF16, TF1, TF1),
DL_DSCH_TFC74	(TF17, TF1, TF1),
DL_DSCH_TFC75	(TF18, TF1, TF1),

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 20 ms TTI & UL TBS (337 bit) and DL TBS (657 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 632 (320 x1) x2 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 1272 (320 x2) x2 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 2872 (320 x3) x3 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (320 x4) x4 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 7672 (320 x4) x6 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 10232 (320 x4) x8 - 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 12792 (320 x4) x10 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 15352 (320 x4) x12 - 8	DTCH: 15352

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)
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 17912 (320 x4) x14 - 8	DTCH: 17912
10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 20472 (320 x4) x16 - 8	DTCH: 20472
11	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 23032 (320 x4) x18 - 8	DTCH: 23032
12	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 25592 (320 x4) x20 - 8	DTCH: 25592
13	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 28152 (320 x4) x22 - 8	DTCH: 28152
14	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 30712 (320 x4) x24 - 8	DTCH: 30712
15	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 33272 (320 x4) x26 - 8	DTCH: 33272
16	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 35832 (320 x4) x28 - 8	DTCH: 35832

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)
17	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 38392 (320 x4) x30 - 8	DTCH: 38392
18	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 40952 (320 x4) x32 - 8	DTCH: 40952
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the minimum set of TFCIs NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.3.3.4 Test requirements

See 18.3.1.3 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: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH/TF2 (2x337).
   - for sub-test 3: DTCH/TF3 (3x337).
   - for sub-tests 4 to 18: DTCH/TF4 (4x337).
3. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.3.4 Interactive or background / UL: 64(145 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 20 ms TTI) / PS RAB + UL: 16.8 DL: 33.6 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.3.4.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.3.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.2 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB, SHCCH and the DCCH.

- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 64 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 2048 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 2048 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.3.4.3 Method of test

Uplink TFS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFCS for the 64 kbps USCH – Transport Block Size 145 bits:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.3

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for 2048 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.3.3.3

Downlink TFCS for 2048 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.3.3.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 20 ms TTI & UL TBS (145 bit) and DL TBS (657 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_USCH_TFC10, UL_USCH_TFC11, UL_USCH_TFC15, UL_USCH_TFC16	DTCH: 632 (128 x1) x5 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_USCH_TFC10, UL_USCH_TFC12, UL_USCH_TFC15, UL_USCH_TFC17	DTCH: 1528 (128 x3) x4 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_USCH_TFC10, UL_USCH_TFC13, UL_USCH_TFC15, UL_USCH_TFC18	DTCH: 2680 (128 x7) x3 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 5112 (128 x10) x4 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 7672 (128 x10) x6- 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 10232 (128x10) x8 - 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 12792 (128 x10)x10- 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 15352 (128 x10)x12- 8	DTCH: 15352

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)
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 17912 (128 x10)x14-8	DTCH: 17912
10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 20472 (128 x10)x16-8	DTCH: 20472
11	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 23032 (320 x4) x18 - 8	DTCH: 23032
12	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 25592 (128 x10) x20 - 8	DTCH: 25592
13	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 28152 (128 x10) x22 - 8	DTCH: 28152
14	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 30712 (128 x10) x24 - 8	DTCH: 30712
15	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 33272 (128 x10) x26 - 8	DTCH: 33272
16	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 35832 (128 x10) x28 - 8	DTCH: 35832

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)
17	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 38392 (128 x10) x30 - 8	DTCH: 38392
18	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC14, UL_USCH_TFC15, UL_USCH_TFC19	DTCH: 40952 (128 x10) x32 - 8	DTCH: 40952
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC10 and UL_TFC15 are part of the minimum set of TFCIs NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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 18.3.1.3 for test procedure.

18.3.3.3.4.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH/TF2 (3x145).
   - for sub-test 3: DTCH/TF3 (7x145).
   - for sub-tests 4 to 18: DTCH/TF4 (10x145).
4. At step 15 the UE shall return
   - for sub-test 4 to 18: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.
   - for sub-test 2: an RLC SDU on DTCH having the first 1272 bits equal to the contents as the DL RLC SDU sent by the SS.
   - for sub-test 3: an RLC SDU on DTCH having the first 2552 bits equal to the contents as the DL RLC SDU sent by the SS.

18.3.3.4 Interactive or background / UL: 384 DL: 2048 kbps / PS RAB + UL: 3.4 DL: 16.8 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.4.1 Interactive or background / UL: 384 DL (337 bit TBS – 20 ms TTI): 2048 kbps (657 bit TBS – 10 ms TTI) / PS RAB+ UL: 3.4 DL: 16.8 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.4.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.4.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.4 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 384 kbps UL PS RAB, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 384 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.4.1.3 Method of test

Uplink TFS for the 384 kbps USCH – Transport Block Size 337 bits:

	TFI	**DTCH**	**SHCCH (SRB#5)**	**DCCH (SRB#1 – SRB#4)**
TFS	TF0, bits	0x337	0x169	0x149
	TF1, bits	1x337	1x169	1x149
	TF2, bits	2x337	N/A	N/A
	TF3, bits	4x337	N/A	N/A
	TF4, bits	8x337	N/A	N/A
	TF5, bits	12x337	N/A	N/A
	TF6, bits	16x337	N/A	N/A
	TF7, bits	20x337	N/A	N/A
	TF8, bits	24x337	N/A	N/A

Uplink TFCS for the 384 kbps USCH – Transport Block size 337 bits:

TFCI	(DTCH, SHCCH, DCCH)
UL_USCH_TFC0	(TF0, TF0, TF0),
UL_USCH_TFC1	(TF1, TF0, TF0),
UL_USCH_TFC2	(TF2, TF0, TF0),
UL_USCH_TFC3	(TF3, TF0, TF0),
UL_USCH_TFC4	(TF4, TF0, TF0),
UL_USCH_TFC5	(TF5, TF0, TF0),
UL_USCH_TFC6	(TF6, TF0, TF0),
UL_USCH_TFC7	(TF7, TF0, TF0),
UL_USCH_TFC8	(TF8, TF0, TF0),
UL_USCH_TFC9	(TF0, TF1, TF0),
UL_USCH_TFC10	(TF1, TF1, TF0),
UL_USCH_TFC11	(TF2, TF1, TF0),
UL_USCH_TFC12	(TF3, TF1, TF0),
UL_USCH_TFC13	(TF4, TF1, TF0),
UL_USCH_TFC14	(TF5, TF1, TF0),
UL_USCH_TFC15	(TF6, TF1, TF0),
UL_USCH_TFC16	(TF7, TF1, TF0),
UL_USCH_TFC17	(TF8, TF1, TF0),
UL_USCH_TFC18	(TF0, TF0, TF1),
UL_USCH_TFC19	(TF1, TF0, TF1),
UL_USCH_TFC20	(TF2, TF0, TF1),
UL_USCH_TFC21	(TF3, TF0, TF1),
UL_USCH_TFC22	(TF4, TF0, TF1),
UL_USCH_TFC23	(TF5, TF0, TF1),
UL_USCH_TFC24	(TF6, TF0, TF1),
UL_USCH_TFC25	(TF7, TF0, TF1),
UL_USCH_TFC26	(TF8, TF0, TF1),
UL_USCH_TFC27	(TF0, TF1, TF1),
UL_USCH_TFC28	(TF1, TF1, TF1),
UL_USCH_TFC29	(TF2, TF1, TF1),
UL_USCH_TFC30	(TF3, TF1, TF1),
UL_USCH_TFC31	(TF4, TF1, TF1),
UL_USCH_TFC32	(TF5, TF1, TF1),
UL_USCH_TFC33	(TF6, TF1, TF1),
UL_USCH_TFC34	(TF7, TF1, TF1),
UL_USCH_TFC35	(TF8, TF1, TF1),

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.2

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.2

Downlink TFS for 2048 kbps DSCH – 10 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFCS for 2048 kbps DSCH - 10 ms TTI

See corresponding table in 18.3.3.3.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL TBS (337 bit) and DL TBS (337 bit):

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_DSCH_TFC1	UL_USCH _TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC18, UL_USCH_TFC19, UL_USCH_TFC27, UL_USCH_TFC28	DTCH: 312 (320 x1) x2 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC2, UL_USCH_TFC9, UL_USCH_TFC11, UL_USCH_TFC18, UL_USCH_TFC20, UL_USCH_TFC27, UL_USCH_TFC29	DTCH: 1272 (320 x2) x2 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21, UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 2552 (320 x4) x2 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 5112 (320 x8) x2 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC5	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 7672 (320 x12) x2 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC14, UL_USCH_TFC18, UL_USCH_TFC23, UL_USCH_TFC27, UL_USCH_TFC32	DTCH: 10232 (320 x16) x2 - 8	DTCH:10232
7	DL_DSCH_TFC7	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 12792 (320 x20) x2 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC7, UL_USCH_TFC9, UL_USCH_TFC16, UL_USCH_TFC18, UL_USCH_TFC25, UL_USCH_TFC27, UL_USCH_TFC34	DTCH: 15352 (320 x24) x2 - 8	DTCH: 1 5352
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 17912 (320 x8) x7 - 8	DTCH: 17912

10	DL_DSCH_TFC10	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 19192 (320 x20) x3 - 8	DTCH: 19192
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC18 and UL_TFC27 are part of the 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.						

18.3.3.4.1.4 Test requirements

See 18.1.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST.
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH/TF2 (2x337).
   - for sub-test 3: DTCH/TF3 (4x337).
   - for sub-test 4: DTCH/TF3 (8x337).
   - for sub-test 5: DTCH/TF4 (12x337)
   - for sub-test 6: DTCH/TF4 (16x337)
   - for sub-test 7: DTCH/TF4 (20x337)
   - for sub-test 8: DTCH/TF4 (24x337)
   - for sub-test 9: DTCH/TF4 (8x337)
   - for sub-test 10: DTCH/TF4 (20x337).
4. At step 15 the UE shall return
   - for sub-test 1 to 10: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.4.2 Interactive or background / UL: 384(145 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 10 ms TTI) / PS RAB + UL: 3.4 DL: 16.8 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.4.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.4.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.4 for the downlink 10 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 384 kbps UL PS RAB, SHCCH and the DCCH.

- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 384 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).

- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.4.1.3 Method of test

Uplink TFS for the 384 kbps USCH – Transport Block Size 145 bits:

	TFI	DTCH	SHCCH (SRB#5)	DCCH (SRB#1 – SRB#4)
TFS	TF0, bits	0x145	0x169	0x149
	TF1, bits	1x145	1x169	1x149
	TF2, bits	3x145	N/A	N/A
	TF3, bits	7x145	N/A	N/A
	TF4, bits	10x145	N/A	N/A
	TF5, bits	20x145	N/A	N/A
	TF6, bits	30x145	N/A	N/A
	TF7, bits	40x145	N/A	N/A
	TF8, bits	60x145	N/A	N/A

Uplink TFCS for the 384 kbps USCH – Transport Block size 145 bits:

See corresponding table in 18.3.3.4.1.2

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.2

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.2

Downlink TFS for 2048 kbps DSCH – 10 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFCS for 2048 kbps DSCH - 10 ms TTI

See corresponding table in 18.3.3.3.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL TBS (337 bit) and DL TBS (337 bit):

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_DSCH_TFC1	UL_USCH _TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC18, UL_USCH_TFC19, UL_USCH_TFC27, UL_USCH_TFC28	DTCH: 632 (128 x1) x5 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC2, UL_USCH_TFC9, UL_USCH_TFC11, UL_USCH_TFC18, UL_USCH_TFC20, UL_USCH_TFC27, UL_USCH_TFC29	DTCH: 1272 (128x5) x2- 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21, UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 2552 (128 x10) x2 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 5112 (128 x20) x2 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC5	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 7672 (128 x30) x2 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC14, UL_USCH_TFC18, UL_USCH_TFC23, UL_USCH_TFC27, UL_USCH_TFC32	DTCH: 10232 (128 x40) x2 - 8	DTCH:10232
7	DL_DSCH_TFC7	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 12792 (128 x50) x2 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC7, UL_USCH_TFC9, UL_USCH_TFC16, UL_USCH_TFC18, UL_USCH_TFC25, UL_USCH_TFC27, UL_USCH_TFC34	DTCH: 15352 (128 x60) x2 - 8	DTCH: 15352
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 17912 (128 x20) x7 - 8	DTCH: 17912

10	DL_DSCH_TFC10	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC9, UL_USCH_TFC18, UL_USCH_TFC27	UL_USCH_TFC0, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 19192 (128 x50) x3 - 8	DTCH: 19192
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC18 and UL_TFC27 are part of the 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.						

18.3.3.4.1.4 Test requirements

See 18.1.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x145).
   - for sub-test 2: DTCH/TF2 (5x145).
   - for sub-test 3: DTCH/TF3 (10x145).
   - for sub-test 4: DTCH/TF3 (20x145).
   - for sub-test 5: DTCH/TF4 (30x145)
   - for sub-test 6: DTCH/TF4 (40x145).
   - for sub-test 7: DTCH/TF4 (50x145).
   - for sub-test 8: DTCH/TF4 (60x145).
   - for sub-test 9: DTCH/TF4 (20x145).
   - for sub-test 10: DTCH/TF4 (50x145).
4. At step 15 the UE shall return
   - for sub-test 1 to 10: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.4.3 Interactive or background / UL: 384 (337 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 20 ms TTI) / PS RAB + UL: 3.4 DL: 16.8 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.4.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.4.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.4 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 384 kbps UL PS RAB, SHCCH and the DCCH.

- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 384 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.4.3.3 Method of test

Uplink TFS for the 384 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3..3.3.3.2

Uplink TFCS for the 384 kbps USCH – Transport Block size 337 bits:

See corresponding table in 18.3.3.3.3.2

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.2

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.2

Downlink TFS for 2048 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFCS for 2048 kbps DSCH – 20 ms TTI

See corresponding table in 18.3.3.3.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL TBS (337 bit) and DL TBS (337 bit):

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC18, UL_USCH_TFC19, UL_USCH_TFC27, UL_USCH_TFC28	DTCH: 632 (320 x1) x2 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC9, UL_USCH_TFC11, UL_USCH_TFC18, UL_USCH_TFC20, UL_USCH_TFC27, UL_USCH_TFC29	DTCH: 1272 (320 x2) x2 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21, UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 2872 (320 x4) x2 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 5112 (320 x8) x2 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC5	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC14, UL_USCH_TFC18, UL_USCH_TFC23, UL_USCH_TFC27, UL_USCH_TFC32	DTCH: 7672 (320 x12) x2 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 10232 (320 x16) x2 - 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC7, UL_USCH_TFC9, UL_USCH_TFC16, UL_USCH_TFC18, UL_USCH_TFC25, UL_USCH_TFC27, UL_USCH_TFC34	DTCH: 12792 (320 x20) x2 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC8, UL_USCH_TFC9, UL_USCH_TFC17, UL_USCH_TFC18, UL_USCH_TFC26, UL_USCH_TFC27, UL_USCH_TFC35	DTCH: 15352 (320 x24) x2 - 8	DTCH: 15352

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)
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 17912 (320 x8) x7- 8	DTCH: 17912
10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 20472 (320 x8) x8- 8	DTCH: 20472
11	DL_DSCH_TFC10	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21, UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 23032 (320 x4) x18 - 8	DTCH: 23032
12	DL_DSCH_TFC10	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 25592 (320 x16) x5 - 8	DTCH: 25592
13	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 28152 (320 x8) x11 - 8	DTCH: 28152
14	DL_DSCH_TFC10	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 20472 (320 x24) x4 - 8	DTCH: 30712
15	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 33272 (320 x8) x13 - 8	DTCH: 33272
16	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 20472 (320 x4) x28 - 8	DTCH: 35832

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)
17	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 38392 (320 x8) x14 - 8	DTCH: 38392
18	DL_DSCH_TFC10	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 40952 (320 x24) x8-8	DTCH: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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.						

18.3.3.4.3.4 Test requirements

See 18.1.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST.
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x337).
   - for sub-test 2: DTCH/TF2 (2x337).
   - for sub-test 3: DTCH/TF3 (4x337).
   - for sub-test 4: DTCH/TF3 (8x337).
   - for sub-test 5: DTCH/TF4 (12x337)
   - for sub-test 6: DTCH/TF5 (16x337)
   - for sub-test 7: DTCH/TF6 (20x337)
   - for sub-test 8: DTCH/TF8 (24x337)
   - for sub-test 9 to 13: DTCH/TF4 (8x337)
   - for sub-test 11: DTCH/TF3 (4x337)
   - for sub-test 12: DTCH/TF6 (16x337)
   - for sub-test 13: DTCH/TF4 (8x337)
   - for sub-test 14: DTCH/TF8 (24x337)
   - for sub-test 15 to 17: DTCH/TF4 (8x337)
   - for sub-test 18: DTCH/TF8 (24x337)
4. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.3.4.4 Interactive or background / UL: 384(145 bit TBS – 20 ms TTI) DL: 2048 kbps (657 bit TBS – 20 ms TTI) / PS RAB + UL: 3.4 DL: 16.8 kbps SRBs for DCCH, CCCH and BCCH + UL: 16.8 DL: 16 kbps SRBs for SHCCH

18.3.3.4.4.1 Conformance requirement

See 18.3.2.4.1.

18.3.3.4.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for two UL transport channels (a RACH and a USCH) and two DL transport channels (DSCH and FACH) as specified in TS 34.108, clause 6.11.6.4.2.4 for the downlink 20 ms TTI case.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 384 kbps UL PS RA B, SHCCH and the DCCH.
- The RACH channel can carry combinations of the signalling Radio Bearer for CCCH, DCCH, and SHCCH *excluding or including* an Interactive/Background 384 kbps UL PS RAB.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB, the SHCCH and the DCCH. The Interactive/Background PS RAB on the DSCH has a 10 ms TTI. The Interactive/Background 384 kbps UL PS RAB channel has a 145 bit Transport Block Size (TBS).
- The FACH can carry combinations of the signalling Radio Bearer for CCCH, DCCH, SCCH, BCCH and *excluding or including* an Interactive/Background 384 kbps PS RAB.

To be able to test the downlink radio bearer on the DSCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.3.4.4.3 Method of test

Uplink TFS for the 384 kbps USCH – Transport Block Size 337 bits:

See corresponding table in 18.3..3.3.3.2

Uplink TFCS for the 384 kbps USCH – Transport Block size 337 bits:

See corresponding table in 18.3.3.3.3.2

Uplink TFS for the RACH without DTCH:

See corresponding table in 18.3.3.1.1.2

Uplink TFS for the RACH with DTCH:

See corresponding table in 18.3.3.1.1.2

Downlink TFS for 2048 kbps DSCH – 20 ms TTI:

See corresponding table in 18.3.3.3.1.3

Downlink TFCS for 2048 kbps DSCH – 20 ms TTI

See corresponding table in 18.3.3.3.1.3

Downlink TFS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH without DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Downlink TFCS for FACH with DTCH – 20 ms TTI:

See corresponding table in 18.3.3.1.1.3

Sub-test for RACH/FACH – 20 ms TT1:

See Section 18.3.6.1

Sub-tests for DSCH/USCH – 10 ms TTI & UL 145 bit TBS and DL 337 bit TBS:

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_DSCH_TFC1	UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC9, UL_USCH_TFC10, UL_USCH_TFC18, UL_USCH_TFC19 UL_USCH_TFC27, UL_USCH_TFC28	DTCH: 632 (128x1) x4 - 8	DTCH: 632
2	DL_DSCH_TFC2	UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC9, UL_USCH_TFC11, UL_USCH_TFC18, UL_USCH_TFC20 UL_USCH_TFC27, UL_USCH_TFC29	DTCH: 1272 (128x5) x2 - 8	DTCH: 1272
3	DL_DSCH_TFC3	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57 UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21 UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 2872 (128x10) x2 - 8	DTCH: 2552
4	DL_DSCH_TFC4	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 5112 (128x20) x2 - 8	DTCH: 5112
5	DL_DSCH_TFC5	UL_USCH_TFC5	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC9, UL_USCH_TFC14 UL_USCH_TFC18, UL_USCH_TFC23, UL_USCH_TFC27, UL_USCH_TFC32	DTCH: 7672 (128x30) x2 - 8	DTCH: 7672
6	DL_DSCH_TFC6	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 10232 (128x40) x2 - 8	DTCH: 10232
7	DL_DSCH_TFC7	UL_USCH_TFC7	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC7, UL_USCH_TFC9, UL_USCH_TFC16 UL_USCH_TFC18, UL_USCH_TFC25, UL_USCH_TFC27, UL_USCH_TFC34	DTCH: 12792 (128x50) x2 - 8	DTCH: 12792
8	DL_DSCH_TFC8	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC8, UL_USCH_TFC9, UL_USCH_TFC17, UL_USCH_TFC18, UL_USCH_TFC26, UL_USCH_TFC27, UL_USCH_TFC35	DTCH: 15352 (128x60) x2 - 8	DTCH: 15352

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)
9	DL_DSCH_TFC9	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 17912 (128x20) x7- 8	DTCH: 17912
10	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 20472 (128x20) x8- 8	DTCH: 20472
11	DL_DSCH_TFC10	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC9, UL_USCH_TFC12, UL_USCH_TFC18, UL_USCH_TFC21, UL_USCH_TFC27, UL_USCH_TFC30	DTCH: 23032 (128x10) x18 - 8	DTCH: 23032
12	DL_DSCH_TFC10	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15, UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 25592 (128x40) x5 - 8	DTCH: 25592
13	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 28152 (128x20) x11 - 8	DTCH: 28152
14	DL_DSCH_TFC10	UL_USCH_TFC8	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC6, UL_USCH_TFC9, UL_USCH_TFC15 UL_USCH_TFC18, UL_USCH_TFC24, UL_USCH_TFC27, UL_USCH_TFC33	DTCH: 30712 (128x60) x4 - 8	DTCH: 30712
15	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 33272 (128x20) x13 - 8	DTCH: 33272
16	DL_DSCH_TFC10	UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 35832 (128x20) x14 - 8	DTCH: 35832

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)
17	DL_DSCH_TFC10	UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 38392 (128x10) x30 - 8	DTCH: 38392
18	DL_DSCH_TFC10	UL_USCH_TFC6	DL_DSCH_TFC0, DL_DSCH_TFC19, DL_DSCH_TFC38, DL_DSCH_TFC57, UL_USCH_TFC0, UL_USCH_TFC5, UL_USCH_TFC10, UL_USCH_TFC15	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC9, UL_USCH_TFC13, UL_USCH_TFC18, UL_USCH_TFC22, UL_USCH_TFC27, UL_USCH_TFC31	DTCH: 40952 (128x40) x8- 8	DTCH: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. DTCH: 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.						

18.3.3.4.3.4 Test requirements

See 18.1.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST.
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: DTCH/TF1 (1x128).
   - for sub-test 2: DTCH/TF2 (5x128).
   - for sub-test 3: DTCH/TF3 (10x128).
   - for sub-test 4: DTCH/TF4 (20x128).
   - for sub-test 5: DTCH/TF5 (30x128)
   - for sub-test 6: DTCH/TF6 (40x128)
   - for sub-test 7: DTCH/TF7 (50x128)
   - for sub-test 8: DTCH/TF8 (60x128)
   - for sub-test 9 to 13: DTCH/TF4 (20x128)
   - for sub-test 14: DTCH/TF8 (60x128)
   - for sub-test 15 to 16: DTCH/TF4 (8x128)
   - for sub-test 17: DTCH/TF3(10x128)
   - for sub-test 18: DTCH/TF6 (40x128)
4. At step 15 the UE shall return
   - for sub-test 1 to 18: an RLC SDU on DTCH having the same content as the DL RLC SDU sent by the SS.

18.3.4 Combinations on PDSCH, SCCPCH, DPCH, PUSCH and PRACH

18.3.4.1 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 DL: 256 kbps / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.1.1 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 kbps (320 bit payload – 20 ms TTI) DL: 256 kbps (320 bit payload – 10 ms TTI) / PS RAB/ + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.1.1.1 Conformance requirement

See 18.3.2.4.1

18.3.4.1.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH, RACH, and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.1. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 320 bit payload and 20 ms TTI.
- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 256 kbps PS RAB on the DSCH has a 320 bit payload and 10 ms TTI.
- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.1.1.3 Method of test

Uplink TFS for DCH:

	TFI	RAB Subflow#1 DTCH	RAB Subflow#2 DTCH	RAB Subflow#3 DTCH	SRB#1-SRB#4 DCCH
TFS	TF0, bits	0x81(alt. 1x0) (NOTE)	0x103	0x60	0x148 (alt. 1x0) (NOTE)
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Uplink TFCS for DCH:

TFCI	(Subflow#1, Subflow#2, Subflow#3, 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)
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC_3 are part of the minimum set of TFCIs. NOTE 2: In case TB size zero is configured for any transport channel, the first TFC is required; it is optional otherwise.	

Uplink TFS for USCH – 320 bit payload& 20 ms TTI:

	TFI	RAB DTCH	SRB SHCCH
TFS	TF0, bits	0x337	0x169
	TF1, bits	1x337	1x169
	TF2, bits	2x337	N/A
	TF3, bits	3x337	N/A
	TF4, bits	4x337	N/A

Uplink TFCS for USCH – 320 bit payload& 20 ms TTI:

TFCI	(RAB, SHCCH)
UL_USCH_TFC0	(TF0, TF0)
UL_USCH_TFC1	(TF1, TF0)
UL_USCH_TFC2	(TF2, TF0)
UL_USCH_TFC3	(TF3, TF1)
UL_USCH_TFC4	(TF4, TF1)
UL_USCH_TFC5	(TF0, TF1)
UL_USCH_TFC6	(TF1, TF1)
UL_USCH_TFC7	(TF2, TF1)
UL_USCH_TFC8	(TF3, TF1)
UL_USCH_TFC9	(TF4, TF1)
NOTE: UL_USCH_TFC0, UL_USCH_TFC1 and UL_USCH_TFC5 are part of the minimum set of TCIs	

TFS for RACH:

	TFI	SRB#0 & SRB#5 CCCH, SHCCH
TFS	TF0, bits	1x170

Downlink TFS for DCH:

		RAB subflow #1 DTCH	RAB subflow #2 DTCH	RAB subflow #3 DTCH	SRB#1-SRB#4 DCCH
TFS	TF0, bits	0x81 (alt. 1x0) (NOTE)	0x103	0x60	0x148 (alt. 1x0) (NOTE)
	TF1, bits	1x39	1x103	1x60	1x148
	TF2, bits	1x81	N/A	N/A	N/A

Downlink TFCS for DCH:

TFCI	DTCH(RAB Subflow#1 – RAB subflow#3), 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)

Downlink TFS for DSCH – 320 bit payload& 10 ms TTI:

		DTCH RAB Subflow#4	SHCCH
TFS	TF0, bits	0x337	0x169
	TF1, bits	1x337	1x169
	TF2, bits	2x337	N/A
	TF3, bits	4x337	N/A
	TF4, bits	8x337	N/A

Downlink TFCS for DSCH – 320 bit payload& 10 ms TTI:

TFCI	256 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0)
DL_DSCH_TFC1	(TF1, TF0)
DL_DSCH_TFC2	(TF2, TF0)
DL_DSCH_TFC3	(TF3, TF0)
DL_DSCH_TFC4	(TF4, TF0)
DL_DSCH_TFC5	(TF0, TF1)
DL_DSCH_TFC6	(TF1, TF1)
DL_DSCH_TFC7	(TF2, TF1)
DL_DSCH_TFC8	(TF3, TF1)
DL_DSCH_TFC9	(TF4, TF1)

Downlink TFS for FACH – 32 kbps:

		CCCH/SHCCH/BCCH
TFS	TF0, bits	0x171
	TF1, bits	1x171
	TF2, bits	2x171
	TF3, bits	3x171(alt. N/A)
	TF4, bits	4x171(alt. N/A)

Downlink TFCS for FACH– 32 kbps:

TFCI	CCCH/SHCCH/BCCH
DL_FACH_TFC0	(TF0)
DL_FACH_TFC1	(TF1)
DL_FACH_TFC2	(TF2)
DL_FACH_TFC3	(TF3)
DL_FACH_TFC4	(TF4)
	ALT
DL_FACH_TFC0	(TF0,)
DL_FACH_TFC1	(TF1)
DL_FACH_TFC2	(TF2)

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_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:312 (1x320) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:632 (2x320) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1912 (3x320) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (4x320) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1912	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:2552 (8x320) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: UL_USCH_TFC0 UL_USCH_TFC1 and UL_USCH_TFC5 are part o f the minimum TFCIs NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.3 for test procedure.

18.3.4.1.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be:
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1(1x337)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)

4. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.

   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS

   - for sub-test 3, 5, and 9: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

   - for sub-test 4, 6, and 10: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.1.2 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(128 bit payload - 20 ms TTI) DL: 256 kbps (320 bit payload – 10 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.1.2.1 Conformance requirement

See 18.3.2.4.1

18.3.4.1.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH , FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.1. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 145 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 256 kbps PS RAB on the DSCH has a 320 bit payload and 10 ms TTI. (TBS).

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.1.2.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 145 bit payload & 20 ms TTI:

	TFI	RAB DTCH	SRB SHCCH
TFS	TF0, bits	0x145	0x169
	TF1, bits	1x145	1x169
	TF2, bits	3x145	N/A
	TF3, bits	7x145	N/A
	TF4, bits	10x145	N/A

Uplink TFCS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 320 bit payload& 10 ms TTI:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DSCH – 320 bit payload& 10 ms TTI:

See comparable table in 18.3.4.1.1.3

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0 UL_USCH_TFC1 UL_USCH_TFC5 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:376 (128 x 1)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:376 (128 x 1)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:760 (128 x 3)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:760 (128 x 3)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC3, UL_TFC0, UL_TFC3,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128) x 2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC5, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: UL_USCH_TFC0 UL_USCH_TFC1 and UL_USCH_TFC5 are part o f the minimum TFCIs NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.3 for test procedure.

18.3.4.1.2.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1(1x145)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60); Subflow#4/TF1(1x145)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2(3x145)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60);Subflow#4/TF2(3x145)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3(7x145)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60); Subflow#4/TF3(7x145)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4(10x145)

- for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60); Subflow#4/TF4(10x145)

4. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.

   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as the RLC SDU sent by SS

   - for sub-test 3: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 312 bits equal to the content as sent by SS

   - for sub-test 4: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 312 bits equal to the content as sent by SS

   - for sub-test 5: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 632 bits equal to the content as sent by SS

   - for sub-test 6: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 632 bits equal to the content as sent by SS

   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

   - for sub-test 9: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

   - for sub-test 10: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as the RLC SDU as sent by SS

18.3.4.1.3 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(320 bit payload – 20 ms TTI) DL: 256 kbps (320 bit payload – 20 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.1.3.1 Conformance requirement

See 18.3.2.4.1

18.3.4.1.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH , FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.1. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 320 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 256 kbps PS RAB on the DSCH has a 320 bit payload and 20 ms TTI.
- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.1.3.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH - 320 bit payload& 20 ms TTI:

		DTCH RAB Subflow#4	**SHCCH**
TFS	TF0, bits	0x337	0x169
	TF1, bits	1x337	1x169
	TF2, bits	2x337	N/A
	TF3, bits	4x337	N/A
	TF4, bits	8x337	N/A
	TF5, bits	12x337	N/A
	TF6, bits	16x337	N/A

Downlink TFCS for DSCH – 320 bit payload& 20 ms TTI:

TFCI	256 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0),
DL_DSCH_TFC2	(TF2, TF0),
DL_DSCH_TFC3	(TF3, TF0),
DL_DSCH_TFC4	(TF4, TF0),
DL_DSCH_TFC5	(TF5, TF0),
DL_DSCH_TFC6	(TF6, TF0),
DL_DSCH_TFC7	(TF0, TF1),
DL_DSCH_TFC8	(TF1, TF1),
DL_DSCH_TFC9	(TF2, TF1),
DL_DSCH_TFC10	(TF3, TF1),
DL_DSCH_TFC11	(TF4, TF1),
DL_DSCH_TFC12	(TF5, TF1),
DL_DSCH_TFC13	(TF6, TF1)

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1912 (3x320) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1912	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:3832 (12x320) -8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320) -8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4 x 320)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (16x320) -8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4 x 320)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (16x320) -8
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 18.3.1.3 for test procedure.

18.3.4.1.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x337)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1(1x60); Subflow#4/TF4 (4x337)
   - for sub-test 13: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 14: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3, 5, and 9: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 4, 6, and 10: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

- for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.1.4 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(128 bit payload - 20 ms TTI) DL: 256 kbps (320 bit payload – 20 ms TTI)/ PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.1.4.1 Conformance requirement

See 18.3.2.4.1

18.3.4.1.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH , FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.1. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 145 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.
- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 256 kbps PS RAB on the DSCH has a 320 bit payload and 20 ms TTI. (TBS).
- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.1.4.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.3.3

Downlink TFCS for DSCH - 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.3.3

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0 UL_USCH_TFC1 UL_USCH_TFC5 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:376 (128 x 1)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:376	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:760 (128 x 3)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:760 (128 x 3)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5 DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:3832 (12x320) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (16x320) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC7, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (16x320) - 8

NOTE 1:	UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs.
NOTE 2:	UL_USCH_TFC0 UL_USCH_TFC1 and UL_USCH_TFC5 are part o f the minimum TFCIs
NOTE 3:	See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See 18.3.1.3 for test procedure.

18.3.4.1.4.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x145)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x145)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2(2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (3x145)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF2 (3x337)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (7x145)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (10x145)
   - for sub-test 13: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 14: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (10x145)
4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3, 5, and 9: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 4, 6, and 10: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 7,9,11,13: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

- for sub-test 8,10,12,14: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.2 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 DL: 384 kbps / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH+ DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.2.1 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 (320 bit payload – 20 ms TTI) DL: 384 kbps (320 bit payload – 10 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.2.1.1 Conformance requirement

See 18.3.2.4.1

18.3.4.2.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH, RACH, and DCH) and three DL transport channels (DSCH , FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.2. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 320 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 256 kbps PS RAB on the DSCH has a 320 bit payload and 10 ms TTI.

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.2.1.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 320 bit payload& 10 ms TTI:

		DTCH RAB Subflow#4	SHCCH
TFS	TF0, bits	0x337	0x169
	TF1, bits	1x337	1x169
	TF2, bits	2x337	N/A
	TF3, bits	4x337	N/A
	TF4, bits	8x337	N/A
	TF4, bits	12x337	N/A

Downlink TFCS for DSCH – 320 bit payload& 10 ms TTI:

TFCI	384 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0),
DL_DSCH_TFC2	(TF2, TF0),
DL_DSCH_TFC3	(TF3, TF0),
DL_DSCH_TFC4	(TF4, TF0),
DL_DSCH_TFC5	(TF5, TF0),
DL_DSCH_TFC6	(TF0, TF1),
DL_DSCH_TFC7	(TF1, TF1),
DL_DSCH_TFC8	(TF2, TF1),
DL_DSCH_TFC9	(TF3, TF1),
DL_DSCH_TFC10	(TF4, TF1),
DL_DSCH_TFC11	(TF5, TF1)

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312 (1x320) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:632 (2x320) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1912 (3x320) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (4x320) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1912	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x320) x 2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:2552 (8x320) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:3832 (12x320)-8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320)-8
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 18.3.1.3 for test procedure.

18.3.4.2.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)

- for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1(1x337)
- for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
- for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)
- for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
- for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
- for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
- for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
- for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
- for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)

4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3, 5, 9 and 11: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 4, 6, 10 and 12: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.2.2 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 (128 bit payload - 20 ms TTI) DL: 384 kbps (320 bit payload – 10 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.2.2.1 Conformance requirement

See 18.3.2.4.1

18.3.4.2.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.2. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.
- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 256 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 384 kbps PS RAB on the DSCH has a 320 bit payload and 10 ms TTI. (TBS).
- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH, and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.2.2.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 10 ms TTI:

See comparable table in 18.3.4.2.1.3

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:376 (1x128)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312 (1x320) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#4:376 (1x128)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:760 (3x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632 (2x320) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:760 (3x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272 (4x320) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#4:1784 (7x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552 (8x320) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:3832 (12x320)-8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320)-8
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: UL_USCH_TFC0 UL_USCH_TFC1 and UL_USCH_TFC5 are part o f the minimum TFCIs NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.3 for test procedure.

18.3.4.2.2.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)

- for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x145)
- for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x145)
- for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (3x128)
- for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (3x128)
- for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (7x128)
- for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (7x128)
- for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x128)
- for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x128)
- for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x128)
- for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x128)

4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 312 bits equal to content sent by SS
   - for sub-test 4: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 312 bits equal to content sent by SS
   - for sub-test 5: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 632 bits equal to content sent by SS
   - for sub-test 6: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 632 bits equal to content sent by SS
   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 9: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same contents equal to content sent by SS
   - for sub-test 10: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same contents equal to content sent by SS

18.3.4.2.3 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(320 bit payload – 20 ms TTI) DL: 384 kbps (320 bit payload – 20 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.2.3.1 Conformance requirement

See 18.3.2.4.1

18.3.4.2.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.2. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 320 bit payload and 20 ms TTI.
- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 384 kbps PS RAB on the DSCH has a 320 bit payload and 20 ms TTI.
- he FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.2.3.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH - 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH - 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH - 320 bit payload& 20 ms TTI:

		DTCH RAB Subflow#4	SHCCH
TFS	TF0, bits	0x337	0x169
	TF1, bits	1x337	1x169
	TF2, bits	2x337	N/A
	TF3, bits	4x337	N/A
	TF4, bits	8x337	N/A
	TF5, bits	12x337	N/A
	TF6, bits	16x337	N/A
	TF7, bits	20x337	N/A
	TF8, bits	24x337	N/A

Downlink TFCS for DSCH – - 320 bit payload & 20 ms TTI:

TFCI	384 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0),
DL_DSCH_TFC2	(TF2, TF0),
DL_DSCH_TFC3	(TF3, TF0),
DL_DSCH_TFC4	(TF4, TF0),
DL_DSCH_TFC5	(TF5, TF0),
DL_DSCH_TFC6	(TF6, TF0),
DL_DSCH_TFC7	(TF7, TF0),
DL_DSCH_TFC8	(TF8, TF0),
DL_DSCH_TFC9	(TF0, TF1),
DL_DSCH_TFC10	(TF1, TF1),
DL_DSCH_TFC11	(TF2, TF1),
DL_DSCH_TFC12	(TF3, TF1),
DL_DSCH_TFC13	(TF4, TF1),
DL_DSCH_TFC14	(TF5, TF1),
DL_DSCH_TFC15	(TF6, TF1),
DL_DSCH_TFC16	(TF7, TF1),
DL_DSCH_TFC17	(TF8, TF1)

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0 UL_USCH_TFC1 UL_USCH_TFC5 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:312 (1x320) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0 DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632 (2x320) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1912 (3x320)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272 (4x320) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1912	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x320)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552 (8x320) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:3832 (12x320) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (4x320)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (16x320) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (16x320) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (4x320)x5 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:6392 (20x320) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (4x320)x5 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (20x320) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:7672 (24x320) - 8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (24x320) - 8
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 18.3.1.3 for test procedure.

18.3.4.2.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x337)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)

- for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
- for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
- for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
- for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
- for sub-test 1,13,15,and 17: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
- for sub-test 12,14,16,18: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)

4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3, 5, 9 and 11: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 4, 6, 10 and 12: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 9,11,13,15 and 17: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 8,10,12,14,16 and 18: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.2.4 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(128 bit payload - 20 ms TTI) DL: 384 kbps (320 bit payload – 20 ms TTI)/ PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.2.4.1 Conformance requirement

See 18.3.2.4.1

18.3.4.2.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.2. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 320 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.
- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 384 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 384 kbps PS RAB on the DSCH has a 320 bit payload and 20 ms TTI. (TBS).
- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.
- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.2.4.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.2.3.1

Downlink TFCS for DSCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.2.3.1

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0 UL_USCH_TFC1 UL_USCH_TFC5 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:376 (1x128)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:312 (1x320) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:376 (1x128)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:760 (3x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632 (2x320) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:760 (3x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (4x320) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1784 (7x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC6, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552 (8x320) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (10x128)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:3832 (12x320) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (10x128)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:3832 (12x320)-8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (16x320) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (16x320) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (10x128)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:6392 (20x320) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (10x128) 6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:6392 (20x320) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (10x128)x7 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:7672 (24x320)-8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC9, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (10x128)x7 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (24x320) - 8
NOTE 1: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs. NOTE 2: UL_USCH_TFC0 UL_USCH_TFC1 and UL_USCH_TFC5 are part o f the minimum TFCIs NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.3.1.3 for test procedure.

18.3.4.2.4.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x145)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1(1x145)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (3x128)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (3x128)

- for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (7x128)
- for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (7x128)
- for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x128)
- for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x128)
- for sub-test 11,13,15, and 17: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x128)
- for sub-test 12,14,16, and 18: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x128)

4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS
   - for sub-test 3, 5, 9 and 1,13, 15 and 17: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 4, 6, 10,12, 14 16 and 18: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS
   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS
   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

18.3.4.3 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 DL: 2048 kbps / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.3.1 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(320 bit payload – 20 ms TTI) DL: 2048 kbps (640 bit payload - 10 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.3.1.1 Conformance requirement

See 18.3.2.4.1

18.3.4.3.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH, RACH, and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.3. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 640 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 320 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 2048 kbps PS RAB on the DSCH has a 640 bit payload and 10 ms TTI.

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.3.1.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH – 320 bit payload& 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 640 bit payload & 10 ms TTI:

		DTCH RAB Subflow#4	SHCCH
TFS	TF0, bits	0x657	0x169
	TF1, bits	1x657	1x169
	TF2, bits	2x657	N/A
	TF3, bits	4x657	N/A
	TF4, bits	8x657	N/A
	TF5, bits	12x657	N/A
	TF6, bits	16x657	N/A
	TF7, bits	20x657	N/A
	TF8, bits	24x657	N/A
	TF9, bits	28x657	N/A
	TF10,bits	30x657	N/A

Downlink TFCS for DSCH – 640 bit payload & 10 ms TTI:

TFCI	2048 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0),
DL_DSCH_TFC2	(TF2, TF0),
DL_DSCH_TFC3	(TF3, TF0),
DL_DSCH_TFC4	(TF4, TF0),
DL_DSCH_TFC5	(TF5, TF0),
DL_DSCH_TFC6	(TF6, TF0)
DL_DSCH_TFC7	(TF7, TF0),
DL_DSCH_TFC8	(TF8, TF0),
DL_DSCH_TFC9	(TF9, TF0),
DL_DSCH_TFC10	(TF10, TF0),
DL_DSCH_TFC11	(TF0, TF1),
DL_DSCH_TFC12	(TF1, TF1),
DL_DSCH_TFC13	(TF2, TF1),
DL_DSCH_TFC14	(TF3, TF1),
DL_DSCH_TFC15	(TF4, TF1),
DL_DSCH_TFC16	(TF5, TF1),
DL_DSCH_TFC17	(TF6, TF1),
DL_DSCH_TFC18	(TF7, TF1),
DL_DSCH_TFC19	(TF8, TF1),
DL_DSCH_TFC20	(TF9, TF1)

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5 DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632 (320x1)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632 (1x640) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (320x1)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (1x640) - 8
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (320x2)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:1272 (2x640) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (320x2)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (2x640) - 8
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2872 (3x320)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:2552 (4x640) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2872 (3x320)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x640) - 8
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (8x640) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (8x640) - 8
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:7672 (12x640) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (12x640) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (4x320)x8 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:10228 (16x640) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (4x320)x8 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:10228 (16x640) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (4x320)x10 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:12792 (20x640) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (4x320)x10 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:12792 (20x640) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (4x320)x12 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:15352 (24x640) - 8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (4x320)x12 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:15352 (24x640) - 8
19	DL_TFC1, DL_DSCH_TFC9	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (4x320)x14 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:17912 (28x640) - 8
20	DL_TFC2, DL_DSCH_TFC9	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (4x320)x14 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:17912 (28x640) - 8
21	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:19192 (4x320)x15 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:19192 (30x640) - 8

22	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:19192 (4x320)x15 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:19192 (30x640) - 8
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 18.3.1.3 for test procedure.

18.3.4.3.1.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x337)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
   - for sub-test 13,15,17,19,21: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 14,16,18,20,22: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS

- for sub-test 3, 5, 9,11,13,15,17,19 and 21: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 4, 6, 10, 12, 14, 16,18, 20, 22: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

- for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

18.3.4.3.2 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64 (128 bit payload - 20 ms TTI) DL: 2048 kbps (640 bit payload - 10 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.3.2.1 Conformance requirement

See 18.3.2.4.1

18.3.4.3.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.3. Test is designed for the downlink shared channel (DSCH) 10 ms TTI case and 640 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background 2048 kbps PS RAB on the DSCH has a 640 bit payload and 10 ms TTI. (TBS).

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.3.2.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH - 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.2.3

Uplink TFCS for USCH – 145 bit payload & 20 ms TTI:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 10 ms TTI:

See comparable table in 18.3.4.3.1.3

Downlink TFCS for DSCH – 10 ms TTI:

See comparable table in 18.3.4.3.1.3

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632 (128x1)x5 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:632 (1x640) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0 UL_USCH_TFC1 UL_USCH_TFC5 UL_USCH_TFC6 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (128x1)x5 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (1x640) - 8
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1528 (128x3)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (2x640) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1528 (128x3)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (2x640) - 8
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2680 (128x7)x3 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:2552 (4x640) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2680 (128x7)x3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x640) - 8
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (128x10)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:5112 (8x640) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (128x10)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (8x640) - 8
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (128x10)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:7672 (12x640) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 128(x10)x6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (12x640) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:10232 (128x10)x8 - 8	Subflow#1:39 Subflow#2:No data Subflow#3:No data Subflow#4:10232 (16x640) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4: 10232 (128x10)x8 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:10232 (16x640) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (128x10)x10 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:12792 (20x640) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (128x10)x10 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:12792 (20x640) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (128x10)x12 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:15352 (24x640) - 8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (128x10)x12 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:15352 (24x640) - 8
19	DL_TFC1, DL_DSCH_TFC9	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (128x10)x14 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:17912 (28x640) - 8
20	DL_TFC2, DL_DSCH_TFC9	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (128x10)x14 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:17912 (28x640) - 8
21	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9 UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:19192 (128x10)x15 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:19192 (30x640) - 8

22	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:19192 (128x10)x15 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:19192 (30x640) - 8
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 18.3.1.3 for test procedure.

18.3.4.3.2.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1(1x145)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x145)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (3x145)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (3x145)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (7x145)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (7x145)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)
   - for sub-test 13,15,17,19,21: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 14,16,18,20,22: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)
4. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.
   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS

- for sub-test 3, 9,11,13,15,17,19 and 21: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 4, 10, 12, 14, 16,18, 20, 22: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 5: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

- for sub-test 6: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

- for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

- for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

18.3.4.3.3 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(320 bit payload – 20 ms TTI) DL: 2048 kbps (640 bit payload - 20 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.3.3.1 Conformance requirement

See 18.3.2.4.1

18.3.4.3.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH, RACH, and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.3. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 640 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps UL PS RAB channel has a 337 bit Transport Block Size (TBS).

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 2048 kbps DL PS RAB channel has a 657 bit Transport Block Size (TBS).

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.3.3.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 20 ms TTI:

		DTCH RAB Subflow#4	SHCCH
TFS	TF0, bits	0x657	0x169
	TF1, bits	1x657	1x169
	TF2, bits	2x657	N/A
	TF3, bits	4x657	N/A
	TF4, bits	8x657	N/A
	TF5, bits	12x657	N/A
	TF6, bits	16x657	N/A
	TF7, bits	20x657	N/A
	TF8, bits	24x657	N/A
	TF9, bits	28x657	N/A
	TF10,bits	32x657	N/A
	TF11,bits	36x657	N/A
	TF12,bits	40x657	N/A
	TF13,bits	44x657	N/A
	TF14,bits	48x657	N/A
	TF15,bits	52x657	N/A
	TF16,bits	56x657	N/A
	TF17,bits	60x657	N/A
	TF17,bits	64x657	N/A

Downlink TFCS for DSCH –20 ms TTI:

TFCI	2048 kbps RAB DTCH & SHCCH
DL_DSCH_TFC0	(TF0, TF0),
DL_DSCH_TFC1	(TF1, TF0),
DL_DSCH_TFC2	(TF2, TF0),
DL_DSCH_TFC3	(TF3, TF0),
DL_DSCH_TFC4	(TF4, TF0),
DL_DSCH_TFC5	(TF5, TF0),
DL_DSCH_TFC6	(TF6, TF0)
DL_DSCH_TFC7	(TF7, TF0),
DL_DSCH_TFC8	(TF8, TF0),
DL_DSCH_TFC9	(TF9, TF0),
DL_DSCH_TFC10	(TF10, TF0),
DL_DSCH_TFC11	(TF11, TF0),
DL_DSCH_TFC12	(TF12, TF0),
DL_DSCH_TFC13	(TF13, TF0),
DL_DSCH_TFC14	(TF14, TF0),
DL_DSCH_TFC15	(TF15, TF0),
DL_DSCH_TFC16	(TF16, TF0),
DL_DSCH_TFC17	(TF17, TF0),
DL_DSCH_TFC18	(TF18, TF0),
DL_DSCH_TFC19	(TF0, TF1),
DL_DSCH_TFC20	(TF1, TF1),
DL_DSCH_TFC21	(TF2, TF1),
DL_DSCH_TFC22	(TF3, TF1),
DL_DSCH_TFC23	(TF4, TF1),
DL_DSCH_TFC24	(TF5, TF1),
DL_DSCH_TFC25	(TF6, TF1),
DL_DSCH_TFC26	(TF7, TF1),
DL_DSCH_TFC27	(TF8, TF1),
DL_DSCH_TFC28	(TF9, TF1)
DL_DSCH_TFC29	(TF10, TF1),
DL_DSCH_TFC30	(TF11, TF1),
DL_DSCH_TFC31	(TF12, TF1),
DL_DSCH_TFC32	(TF13, TF1),
DL_DSCH_TFC33	(TF14, TF1),
DL_DSCH_TFC34	(TF15, TF1),
DL_DSCH_TFC35	(TF16, TF1),
DL_DSCH_TFC36	(TF17, TF1),
DL_DSCH_TFC37	(TF17, TF1),

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

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_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5 DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5 DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:312	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632 (320x1)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:632 (1x640) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (320x1)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (1x640) - 8
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (320x2)x2 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (2x640) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (320x2)x2 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (2x640) - 8
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3,	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2872 (3x320) x 3 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:2552 (4x640) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2872 (3x320) x 3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x640) - 8
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320) x 4 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:5112 (8x640) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (4x320) x 4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (8x640) - 8
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:7672 (12x640) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (4x320)x6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (12x640) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (4x320)x8 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:10228 (16x640) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (4x320)x8 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:10228 (16x640) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (4x320)x10 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:12792 (20x640) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (4x320)x10 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:12792 (20x640) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (4x320)x12 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:15352 (24x640) - 8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (4x320)x12 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:15352 (24x640) - 8
19	DL_TFC1, DL_DSCH_TFC9	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (4x320)x14 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:17912 (28x640) - 8
20	DL_TFC2, DL_DSCH_TFC9	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (4x320)x14 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:17912 (28x640) - 8
21	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 20472 (4x320)x16 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:20472 (32x640) - 8

22	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subfl#4: 20472 (4x320)x16 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:20472 (32x640) - 8
23	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 23032 (4x320)x18 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:23032 (36x640) - 8
24	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subfl#4: 23032 (4x320)x18 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:23032 (36x640) - 8
25	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 25592 (4x320)x20 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:25592 (40x640) - 8
26	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subfl#4: 25592 (4x320)x20 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:25592 (40x640) - 8
27	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 28152 (4x320)x22 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:28152 (44x640) - 8
28	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:28152 (4x320)x22 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:28152 (44x640) - 8

29	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:30712 (4x320)x24 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:30712 (48x640) - 8
30	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:30712 (4x320)x24 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:30712 (48x640) - 8
31	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:33272 (4x320)x26 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:33272 (52x640) - 8
32	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:33272 (4x320)x26 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:33272 (52x640) - 8
33	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:35832 (4x320)x28 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:35832 (56x640) - 8
34	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:35832 (4x320)x28 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:35832 (56x640) - 8
35	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:38392 (4x320)x30 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:38392 (60x640) - 8

36	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:38392 (4x320)x30 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:38392 (60x640) - 8
37	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:40952 (4x320)x32 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:40952 (64x640) - 8
38	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:40952 (4x320)x32 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:40952 (64x640) - 8
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 18.3.1.3 for test procedure.

18.3.4.3.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1 (1x337)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1 (1x337)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (2x337)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2 (2x337)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (3x337)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (3x337)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)

- for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)

- for sub-test 13,15,17,19,21,23,25,27,29,31,33,35, and 37: Subflow#1/TF1 (1x39); Subflow#4/TF4 (4x337)

- for sub-test 14,16,18,20,22,24,26,28,30,32,34,36,and 38: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (4x337)

4. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.

- for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS

- for sub-test 3, 5, 9,11,13,15,17,19,21,23,25,27,29,31,33,35, and 37: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 4, 6, 10, 12, 14, 16,18, 20, 22,24,26,28,30,32,34,36, and 38: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

- for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

- for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

18.3.4.3.4 Conversational / speech / UL: 12.2 DL: 12.2 kbps / CS RAB + UL: 3.4 DL: 3.4 kbps SRBs for DCCH + Interactive or background / UL: 64(128 bit payload - 20 ms TTI) DL: 2048 kbps (640 bit payload - 20 ms TTI) / PS RAB + UL: 16.8 kbps SRBs for CCCH and SHCCH + DL: 33.6 kbps SRBs for CCCH SHCCH and BCCH

18.3.4.3.3.1 Conformance requirement

See 18.3.2.4.1

18.3.4.3.3.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration for three UL transport channels (USCH , RACH , and DCH) and three DL transport channels (DSCH, FACH, and DCH) as specified in TS 34.108, clause 6.11.6.4.3.3. Test is designed for the downlink shared channel (DSCH) 20 ms TTI case and 640 bit payload for the Interactive/Background PS RAB.

On the UL

- The USCH channel can carry combinations of the Interactive/Background 64 kbps UL PS RAB and 16.8 kbps SHCCH. The Interactive/Background 64 kbps PS RAB on the USCH has a 145 bit payload and 20 ms TTI.

- The RACH channel can carry combinations of the 16.8 kbps signalling Radio Bearers for CCCH and SHCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH.

On the DL

- The DSCH can carry combinations of the Interactive/Background 2048 kbps PS RAB and the 16.8 kbps SHCCH. The Interactive/Background PS RAB on the DSCH has a 20 ms TTI. The Interactive/Background 2048 kbps PS RAB on the DSCH has a 640 bit payload and 20 ms TTI. (TBS).

- The FACH can carry combinations of the signalling 33.6 kbps Radio Bearer for CCCH, BCCH and SCCH.

- The DCH channel can carry combinations of the 12.2 kbps Conversational/Speech/CS and the 3.4 kbps DCCH

To be able to test the downlink radio bearer on the DSCH and the DCH, the UE loopback function is used on the uplink radio bearer on the USCH.

18.3.4.3.3.3 Method of test

Uplink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Uplink TFS for USCH:

See comparable table in 18.3.4.1.1.3

Uplink TFCS for USCH:

See comparable table in 18.3.4.1.1.3

TFS for RACH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for DCH:

See comparable table in 18.3.4.1.1.3

Downlink TFS for DSCH – 640 bit payload & 20 ms TTI:

See comparable table in 18.3.4.3.3.3

Downlink TFCS for DSCH – 640 bit payload & 20 ms TTI:

See comparable table in 18.3.4.3.3.3

Downlink TFS for FACH – 32 kbps:

See comparable table in 18.3.4.1.1.3

Downlink TFCS for FACH– 32 kbps:

See comparable table in 18.3.4.1.1.3

Sub-tests – USCH:

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_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:No data
2	DL_TFC2	UL_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:128	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:No data
3	DL_TFC1, DL_DSCH_TFC1	UL_TFC1, UL_USCH_TFC1	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:632 (128x1)x5 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:632 (1x640) - 8
4	DL_TFC2, DL_DSCH_TFC1	UL_TFC2, UL_USCH_TFC1	DL_DSCH_TFC0 DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC5, UL_USCH_TFC6, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (128x1)x5 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:632 (1x640) - 8
5	DL_TFC1, DL_DSCH_TFC2	UL_TFC1, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:1528 (128x3)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:1272 (2x640) - 8
6	DL_TFC2, DL_DSCH_TFC2	UL_TFC2, UL_USCH_TFC2	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC2, UL_USCH_TFC5, UL_USCH_TFC7, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1528 (128x3)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:1272 (2x640) - 8
7	DL_TFC1, DL_DSCH_TFC3	UL_TFC1, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:2680 (128x7) x 3 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:2552 (4x640) - 8

8	DL_TFC2, DL_DSCH_TFC3	UL_TFC2, UL_USCH_TFC3	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC3, UL_USCH_TFC5, UL_USCH_TFC8, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2680 (128x7) x 3 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:2552 (4x640) - 8
9	DL_TFC1, DL_DSCH_TFC4	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:5112 (8x640) - 8
10	DL_TFC2, DL_DSCH_TFC4	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (10x128)x4 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:5112 (8x640) - 8
11	DL_TFC1, DL_DSCH_TFC5	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (10x128)x6 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:7672 (12x640) - 8
12	DL_TFC2, DL_DSCH_TFC5	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (10x128)x6 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:7672 (12x640) - 8
13	DL_TFC1, DL_DSCH_TFC6	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (10x128)x8 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:10228 (16x640) - 8
14	DL_TFC2, DL_DSCH_TFC6	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:10228 (10x128)x8 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:10228 (16x640) - 8

15	DL_TFC1, DL_DSCH_TFC7	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (10x1280)x10 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:12792 (20x640) - 8
16	DL_TFC2, DL_DSCH_TFC7	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:12792 (10x128)x10 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:12792 (20x640) - 8
17	DL_TFC1, DL_DSCH_TFC8	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (10x128)x12 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:15352 (24x640) - 8
18	DL_TFC2, DL_DSCH_TFC8	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:15352 (10x128)x12 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:15352 (24x640) - 8
19	DL_TFC1, DL_DSCH_TFC9	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (10x128)x14 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:17912 (28x640) - 8
20	DL_TFC2, DL_DSCH_TFC9	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:17912 (10x128)x14 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:17912 (28x640) - 8
21	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 20472 (10x128)x16 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:20472 (32x640) - 8

22	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:20472 (10x128)x16 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:20472 (32x640) - 8
23	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:23032 (10x128)x18 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:23032 (36x640) - 8
24	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:23032 (10x128)x18 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:23032 (36x640) - 8
25	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflow#4:25592 (10x128)x20 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:25592 (40x640) - 8
26	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subfl#4: 25592 (10x128)x20 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:25592 (40x640) - 8
27	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subfl#4: 28152 (10x128)x22 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:28152 (44x640) - 8
28	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:28152 (10x128)x22 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:28152 (44x640) - 8

29	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:30712 (10x128)x24 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:30712 (48x640) - 8
30	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:30712 (10x128)x24 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:30712 (48x640) - 8
31	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:33272 (10x128)x26 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:33272 (52x640) - 8
32	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:33272 (10x128)x26 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:33272 (52x640) - 8
33	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:35832 (10x128)x28 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:35832 (56x640) - 8
34	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:35832 (10x128)x28 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:35832 (56x640) - 8
35	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:38392 (10x128)x30 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:38392 (60x640) - 8

36	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:38392 (10x128)x30 - 8	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflow#4:38392 (60x640) - 8
37	DL_TFC1, DL_DSCH_TFC10	UL_TFC1, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	Subflow#1:39 Subflow#2:103 Subflow#3:60 Subflw#4:40952 (10x128)x32 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:40952 (64x640) - 8
38	DL_TFC2, DL_DSCH_TFC10	UL_TFC2, UL_USCH_TFC4	DL_DSCH_TFC0, DL_DSCH_TFC11, UL_USCH_TFC0, UL_USCH_TFC5, DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_USCH_TFC0, UL_USCH_TFC1, UL_USCH_TFC4, UL_USCH_TFC5, UL_USCH_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	Subflow#1:81 Subflow#2:103 Subflow#3:60 Subflw#4:40952 (10x128)x32 - 8	Subflow#1:39 Subflow#2:No data Subflow#1:No data Subflow#4:40952 (64x640) - 8
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 18.3.1.3 for test procedure.

18.3.4.3.3.4 Test requirements

See 18.3.1.3 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step A10i or B10b the UE shall send PUSCH CAPACITY REQUEST
3. At step 15 the UE transmitted transport format shall be
   - for sub-test 1: Subflow#1/TF1 (1x39).
   - for sub-test 2: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60)
   - for sub-test 3: Subflow#1/TF1 (1x39); Subflow#4/TF1(1x145)
   - for sub-test 4: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF1(1x145)
   - for sub-test 5: Subflow#1/TF1 (1x39); Subflow#4/TF2 (3x145)
   - for sub-test 6: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF2(3x145)
   - for sub-test 7: Subflow#1/TF1 (1x39); Subflow#4/TF3 (7x145)
   - for sub-test 8: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF3 (7x145)
   - for sub-test 9: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)
   - for sub-test 10: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)
   - for sub-test 11: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)

- for sub-test 12: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)

- for sub-test 13,15,17,19,21,23,2,5,27,29,31,33,35 and 37: Subflow#1/TF1 (1x39); Subflow#4/TF4 (10x145)

- for sub-test 14,16,18,20,22,24,26,28,30,32,34,36 and 38: Subflow#1/TF2 (1x81); Subflow#2/TF1 (1x103); and Subflow#3/TF1 (1x60); Subflow#4/TF4 (10x145)

4. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on Subflow#1 having the same content as sent by SS; and no data shall be received on Subflow#2 or Subflow#3.

   - for sub-test 2: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS

   - for sub-test 3, 9,11,13,15,17,19,21,23,25,27,29,31,33,35 and 37: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the same content as sent by SS

   - for sub-test 4, 10, 12, 14, 16,18, 20, 22,24,26,28,30,32,34,36 and 38: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the same content as sent by SS

   - for sub-test 5: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

   - for sub-test 6: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 1272 bits equal to the content as sent by SS

   - for sub-test 7: an RLC SDU on Subflow#1 having the same content as sent by SS; no data shall be received on Subflow#2 or Subflow#3; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

   - for sub-test 8: an RLC SDU on each of Subflow#1, Subflow#2 and Subflow#3 having the same content as sent by SS; and an RLC SDU on Subflow#4 having the first 2552 bits equal to the content as sent by SS

18.3.5 Combinations on SCCPCH

18.3.5.1 Stand-alone signalling RB for PCCH

18.3.5.1.1 Stand-alone signalling RB for PCCH at 12 kbps

18.3.5.1.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.1.1.2 Test Purpose

To verify establishment and data transfer of Paging 1 message which comprises IE "BCCH Modification Information", with the "Value Tag" different from the "MIB Value Tag" of the current Master Information Block. This test is specified in TS 34.108, clause 6.11.6.4.4.1. The SCCPCH carries the PCH at 12 kbps.

18.3.5.1.1.3 Method of Test

The contents of the System Information Block type 5 are specified in clause 8.1.2.2.

Downlink TFS for PCCH:

		SRBs
TFS	TF0, bits	0x240
	TF1, bits	1x240

Downlink TFCS for PCCH:

TFCI	(SRB)
DL_TFC0	(TF0)
DL_TFC1	(TF1)

Sub-test:

See 18.3.1.1 for test procedure.

18.3.5.1.1.4 Test Requirements

See 18.3.1.1 for definition of step 6

1. At step 6 the UE transmitted PAGING RESPONSE (DCCH) received at the SS shall complete the test and end gracefully.

18.3.5.1.2 Stand-alone signalling RB for PCCH at 8 kbps

18.3.5.1.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.1.2.2 Test Purpose

To verify establishment and data transfer of Paging 1 message which comprises IE "BCCH Modification Information", with the "Value Tag" different from the "MIB Value Tag" of the current Master Information Block. This test specified in TS 34.108, clause 6.11.6.4.4.1. The SCCPCH carries the PCH at 8 kbps.

18.3.5.1.2.3 Method of Test

The contents of the System Information Block type 5 is specified in clause 8.1.2.2.

Downlink TFS for PCCH:

		SRBs
TFS	TF0, bits	0x80
	TF1, bits	1x80
	TF2, bits	2x80

Downlink TFCS:

TFCI	(SRB)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)

Sub-tests:

See 18.3.1.1 for test procedure.

18.3.5.1.2.4 Test Requirements

See 18.3.1.1 for definition of step 6

1. At step 6 the UE transmitted PAGING RESPONSE (DCCH) received at the SS shall complete the test and end gracefully.

18.3.5.2 Interactive/Background PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.2.

This radio bearer configuration is tested with three different SYSTEM INFORMATION (BCCH) configurations:

1. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.1(TDD FFS).

   Two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for Interactive/Background PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

   This configuration is verified in test case 18.3.5.2.1.

2. The contents of System Information Block type 5 as specified in TS 34.108, clause 6.1.3 (TDD FFS).

   Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for Interactive/Background PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

   This configuration is verified in test case 18.3.5.2.2.

3. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.2 (TDD FFS).

   Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for Interactive/Background PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

   This configuration is verified in test case 18.3.5.2.3.

18.3.5.2.1 One SCCPCH: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.2 and 6.11.6.4.5.2 for the case when two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.2(Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2.1.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.1 (TDD FFS).

Uplink TFS:

	TFI	RB7+SRB (12.8 kbps on RACH)
TFS	TF0, bits	1 x 170

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0

Downlink TFS for SCCPCH#2:

	TFI	RB7 (32 kbps)	SRBs
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3, bits	N/A	3x171
	TF4, bits	N/A	4x171

Downlink TFCS for SCCPCH#2:

TFCI	(RB7,SRB)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0, TF1)
DL_TFC2	(TF0, TF2)
DL_TFC3	(TF0, TF3)
DL_TFC4	(TF0, TF4)
DL_TFC5	(TF1, TF0)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF1, TF2)
DL_TFC8	(TF2, TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits	RB7: 312 bits
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits	RB7: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

18.3.5.2.1.4 Test Requirements

See 18.3.1.1 for definition of step 15

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB7 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 RB7 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2.2 Two SCCPCHs: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.2 and 6.11.6.4.5.2 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.2 (Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2.2.3 Method of Test

The contents of System Information Block type 5 shall be as specified in TS 34.108, clause 6.1.3 (TDD FFS).

Uplink TFS:

	TFI	RB7+SRB (12.8 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0

Downlink TFS (for SCCPCH#2 & SCCPCH#3):

	TFI	RB7 (32 kbps)	SRBs
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3,bits	N/A	3x171
	TF4,bits	N/A	4x171

Downlink TFCS (for SCCPCH#2 & SCCPCH#3):

TFCI	(RB7,SRB)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0, TF1)
DL_TFC2	(TF0, TF2)
DL_TFC3	(TF0, TF3)
DL_TFC4	(TF0, TF4)
DL_TFC5	(TF1, TF0)
DL_TFC6	(TF1, TF1)
DL_TFC7	(TF1, TF2)
DL_TFC8	(TF2, TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits	RB7: 312 bits
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits	RB7: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

18.3.5.2.2.4 Test Requirements

See 18.3.1.1 for definition of step 15

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB7 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 RB7 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2.3 One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.2 and 6.11.6.4.5.2 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.2 (Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2.3.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.2 (TDD FFS).

Uplink TFS:

	TFI	RB7+SRB (12.8 kbps on RACH)
TFS	TF0, bits	1 x 170

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0

Downlink TFS for SCCPCH#3:

	TFI	RB7 (32 kbps)	SRBs
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3,bits	N/A	3x171
	TF4,bits	N/A	4x171

Downlink TFCS for SCCPCH#3:

TFCI	(SRB, RB7)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0, TF1)
DL_TFC2	(TF0, TF2)
DL_TFC3	(TF0, TF3)
DL_TFC4	(TF0, TF4)
DL_TFC5	(TF1,TF0)
DL_TFC6	(TF1,TF2)
DL_TFC7	(TF1,TF3)
DL_TFC8	(TF2,TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits	RB7: 312 bits
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits	RB7: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

18.3.5.2.3.4 Test Requirements

See 18.3.1.1 for definition of step 15

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB7 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 RB7 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2a Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.2a.

This radio bearer configuration is tested with three different SYSTEM INFORMATION (BCCH) configurations:

1. The contents of System Information Block type 5 shall be as per the message specific content below.

   Two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

   This configuration is verified in test case 18.3.5.2a.1.

2. The contents of System Information Block type 5 as specified in TS 34.108, clause 6.1.3.

   Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

   This configuration is verified in test case 18.3.5.2a.2.

3. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.2.

   Three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

   This configuration is verified in test case 18.3.5.2a.3.

Specific Message Content for Radio Bearer Setup message to be used for these test cases:

Use the RADIO BEARER SETUP message as defined in [9] TS 34.108 clause 9, with the following exceptions:

Information Element	Value/remark
- RAB information for setup	
- RAB info	(AM DTCH for PS domain)
- RAB identity	0000 0101B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	20
- PDCP Info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- CHOICE SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 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	7
- 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	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	7
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	7
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	

Information Element	Value/remark
- Number of downlink RLC logical channels - Downlink transport channel type - DL DCH Transport channel identity - DL DSCH Transport channel identity - Logical channel identity	1 FACH Not Present Not Present 7
- RAB identity	0000 0110B The first/ leftmost bit of the bit string contains the most significant bit of the RAB identity.
- CN domain identity	PS domain
- NAS Synchronization Indicator	Not Present
- Re-establishment timer	useT315
- RB information to setup	
- RB identity	24
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AM RLC
- Transmission RLC discard	
- CHOICE SDU discard mode	No Discard
- MAX_DAT	15
- Transmission window size	128
- Timer_RST	500
- Max_RST	4
- Polling info	
- Timer_poll_prohibit	200
- Timer_poll	200
- Poll_PDU	Not Present
- Poll_SDU	1
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AM RLC
- In-sequence delivery	TRUE
- Receiving window size	128
- Downlink RLC status info	
- Timer_status_prohibit	200
- Timer_EPC	Not Present
- Missing PDU indicator	TRUE
- Timer_STATUS_periodic	Not Present
- RB mapping info	
- Information for each multiplexing option	2 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	10
- 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	DCH
- DL DCH Transport channel identity	6
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	10
- RLC logical channel mapping indicator	Not Present
- Number of uplink RLC logical channels	1
- Uplink transport channel type	RACH
- UL Transport channel identity	Not Present
- Logical channel identity	10
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	

Information Element	Value/remark
- Number of downlink RLC logical channels	1
- Downlink transport channel type	FACH
- DL DCH Transport channel identity	Not Present
- DL DSCH Transport channel identity	Not Present
- Logical channel identity	10

18.3.5.2a.1 One SCCPCH: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2a.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2a.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.2a and 6.11.6.4.5.3 for the case when two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.3.1 (Interactive/Background 12.8 kbps PS RAB + Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2a.1.3 Method of Test

The contents of System Information Block type 5 per the specific message content below.

See 18.3.1.1 for test procedure.

NOTE: The test procedure for single radio bearer configurations is used as there are no uplink transport format combinations for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	TFI	RB7+RB8+SRB (2x12.8 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB7 + RB8
UL_TFC0	TF0

Downlink TFS for SCCPCH#2:

	TFI	RB7 + RB8 (2x32 kbps)	SRBs
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3, bits	N/A	3x171
	TF4, bits	N/A	4x171

Downlink TFCS for SCCPCH#2:

TFCI	(RB7+RB8, SRB)
DL_TFC0	(TF0,TF0)
DL_TFC1	(TF0,TF1)
DL_TFC2	(TF0,TF2)
DL_TFC3	(TF0,TF3)
DL_TFC4	(TF0,TF4)
DL_TFC5	(TF1,TF0)
DL_TFC6	(TF1,TF1)
DL_TFC7	(TF1,TF2)
DL_TFC8	(TF2,TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits RB8: 376 bits	RB7: 312 bits RB8: No Data
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits RB8: 632 bits	RB7: No Data RB8: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

Specific Message Contents

Use the default parameter values for the system information block 5 with the same type specified in clause 6.1.1 of TS 34.108, with the following exceptions

Information Element	Value/remark
- SIB6 indicator	FALSE

See 18.3.1.1 for test procedure.

18.3.5.2.3.4 Test Requirements

See 18.3.1.1 for definition of step 15

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB7 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 RB8 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2a.2 Two SCCPCHs: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2a.2. 1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2a.2. 2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.2a and 6.11.6.4.5.3 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and both the second and third SCCPCHs carry the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.3.1 (Interactive/Background 12.8 kbps PS RAB + Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2a.2.1.3 Method of Test

The contents of System Information Block type 5 shall be as specified in TS 34.108, clause 6.1.3.

See 18.3.1.1 for test procedure.

NOTE: The test procedure for single radio bearer configurations is used as there are no uplink transport format combinations for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	TFI	**RB7 + RB8 (2x12.8 kbps on RACH)**
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	**RB7 + RB8**
UL_TFC0	TF0

Downlink TFS:

	TFI	**RB7 + RB8 (2x32 kbps)**	**SRBs**
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3, bits	N/A	3x171
	TF4, bits	N/A	4x171

Downlink TFCS for SCCPCH#2 & #3:

TFCI	**(SRB, RB7+RB8)**
DL_TFC0	(TF0,TF0)
DL_TFC1	(TF0,TF1)
DL_TFC2	(TF0,TF2)
DL_TFC3	(TF0,TF3)
DL_TFC4	(TF0,TF4)
DL_TFC5	(TF1,TF0)
DL_TFC6	(TF1,TF1)
DL_TFC7	(TF1,TF2)
DL_TFC8	(TF2,TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits RB8: 376 bits	RB7: 312 bits RB8: No Data
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits RB8: 632 bits	RB7: No Data RB8: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

18.3.5.2.3.4 Test Requirements

See 18.3.1.1 for definition of step 15

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
   - for sub-test 1: an RLC SDU on RB7 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 RB8 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2a.3 One SCCPCH/connected mode: Interactive/Background 32 kbps PS RAB + Interactive/Background 32 kbps PS RAB + SRBs for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.2a.3.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2a.3. 2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.10.2.4.3.2 and 6.10.2.4.4.2 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for two Interactive/Background 32 kbps PS RABs and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.10.2.4.4.2 (Interactive/Background 32 kbps PS RA B + Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.2a.3.1.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.2.

See 18.3.1.1 for test procedure.

NOTE: The test procedure for single radio bearer configurations is used as there are no uplink transport format combinations for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	TFI	RB7+RB8+SRB (2x12.8 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB7 + RB8
UL_TFC0	TF0

Downlink TFS for SCCPCH #3:

	TFI	RB7 + RB8 (2x32 kbps)	SRBs
TFS	TF0, bits	0x363	0x171
	TF1, bits	1x363	1x171
	TF2, bits	2x363	2x171
	TF3, bits	N/A	3x171
	TF4, bits	N/A	4x171

Downlink TFCS for third SCCPCH:

TFCI	(SRB, RB7+RB8)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0,TF1)
DL_TFC2	(TF0,TF2)
DL_TFC3	(TF0,TF3)
DL_TFC4	(TF0,TF4)
DL_TFC5	(TF1,TF0)
DL_TFC6	(TF1,TF1)
DL_TFC7	(TF1,TF2)
DL_TFC8	(TF2,TF0)

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 376 bits RB8: 376 bits	RB7: 312 bits RB8: No Data
2	DL_TFC8	UL_TFC0	DL_TFC0	UL_TFC0	RB7: 632 bits RB8: 632 bits	RB7: No Data RB8: 632 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB7: 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.

18.3.5.2.3.4 Test Requirements

See 18.3.1.1 for definition of step 15

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

2. At step 15 the UE shall return

   - for sub-test 1: an RLC SDU on RB7 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 RB8 having the same content as the DL RLC SDU sent by the SS.

18.3.5.2b SRBs for CCCH + SRB for DCCH + SRB for BCCH

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.2b.

This radio bearer configuration is tested with one SYSTEM INFORMATION (BCCH) configuration:

1. The contents of System Information Block type 5 and 6 as specified in TS 34.108, clause 6.1.1 (TDD FSS).

   Two SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH and the second SCCPCH carries the FACH for SRBs on CCCH/ DCCH/ BCCH.

18.3.5.2b.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.2b.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.2b and 6.11.6.4.5.1 for the case when one SCCPCH is used in this SYSTEM INFORMATION configuration. The SCCPCH carries the FACH for SRBs on CCCH/ DCCH/ BCCH.

18.3.5.2b.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.1(TDD FSS).

See 18.3.1.1 for test procedure.

NOTE: The test procedure for single radio bearer configurations is used as there are no uplink transport format combinations for simultaneous data transmission on the PS radio bearers, nor any transport format combination for simultaneous data transmission and signalling.

Uplink TFS:

	TFI	SRB
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	SRB
UL_TFC0	TF0

Downlink TFS for SCCPCH:

	TFI	SRBs
TFS	TF0, bits	0x171
	TF1, bits	1x171
	TF2, bits	2x171
	TF3, bits	3x171
	TF4, bits	4x171

Downlink TFCS for SCCPCH:

TFCI	(SRB)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)
DL_TFC3	(TF3)
DL_TFC4	(TF4)

18.3.5.2b.4 Test Requirements

See 18.3.1.1 for definition of step 6

1. At step 6 the UE transmitted PAGING RESPONSE (DCCH) received at the SS shall complete the test and end gracefully.

18.3.5.3 Interactive/Background RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.3.1 Interactive/Background 32 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.3.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.3.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.3 and 6.11.6.4.5.2 for the case when one SCCPCH is used in this SYSTEM INFORMATION (BCCH) configuration. The SCCPCH carries the PCH, the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.2 (Interactive/Background - 12.2 kbps) PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.3.1.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.0b.

Uplink TFS:

	TFI	RB8 (12.8 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB8
UL_TFC0	TF0

Downlink TFS:

	TFI	RB8 (32 kbps)	PCCH	SRBs
TFS	TF0, bits	0x363	0x240	0x171
	TF1, bits	1x363	1x240	1x171
	TF2, bits	2x363	N/A	2x171
	TF3, bits	N/A	N/A	3x171
	TF4, bits	N/A	N/A	4x171

Downlink TFCS:

TFCI	(RB8, PCCH, SRB)
DL_TFC0	(TF0, TF0, TF0),
DL_TFC1	(TF0, TF0, TF1),
DL_TFC2	(TF0, TF0, TF2),
DL_TFC3	(TF0, TF0, TF3),
DL_TFC4	(TF0, TF0, TF4),
DL_TFC5	(TF0, TF1, TF0),
DL_TFC6	(TF0, TF1, TF1),
DL_TFC7	(TF0, TF1, TF2),
DL_TFC8	(TF0, TF1, TF3),
DL_TFC9	(TF0, TF1, TF4),
DL_TFC10	(TF1, TF0, TF0),
DL_TFC11	(TF1, TF0, TF1),
DL_TFC12	(TF1, TF0, TF2),
DL_TFC13	(TF1, TF0, TF3),
DL_TFC14	(TF1, TF0, TF4),
DL_TFC15	(TF1, TF1, TF0),
DL_TFC16	(TF1, TF1, TF1),
DL_TFC17	(TF1, TF1, TF2),
DL_TFC18	(TF1, TF1, TF3),
DL_TFC19	(TF1, TF1, TF4),
DL_TFC20	(TF2, TF0, TF0),
DL_TFC21	(TF2, TF0, TF1),
DL_TFC22	(TF2, TF0, TF2),
DL_TFC23	(TF2, TF0, TF3),
DL_TFC24	(TF2, TF0, TF4),
DL_TFC25	(TF2, TF1, TF0),
DL_TFC26	(TF2, TF1, TF1),
DL_TFC27	(TF2, TF1, TF2),
DL_TFC28	(TF2, TF1, TF3),
DL_TFC29	(TF2, TF1, TF4)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC20	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC0	RB8:632 bits	RB8: 632 bits
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB8: 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 the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

See 18.3.1.1 for test procedure.

18.3.5.3.1.4 Test requirements

See 18.3.1.1 for definition of step 15

1. At step 15 the UE shall return an RLC SDU on RB8 having the same content as sent by SS

18.3.5.3.2 Interactive/Background 16 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.3.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.3.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.3 and 6.11.6.4.5.2 for the case when one SCCPCH is used in this SYSTEM INFORMATION (BCCH) configuration. The SCCPCH carries the PCH, the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.2 (Interactive/Background - 12.2 kbps) PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.3.2.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.0b.

Uplink TFS:

	TFI	RB8 (12.8 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB8
UL_TFC0	TF0

Downlink TFS:

	TFI	RB8 (32 kbps)	PCCH	SRBs
TFS	TF0, bits	0x363	0x80	0x171
	TF1, bits	1x363	1x80	1x171
	TF2, bits	N/A	2x80	2x171

Downlink TFCS:

TFCI	(SRB, PCCH, RB8)
DL_TFC0	(TF0, TF0, TF0),
DL_TFC1	(TF0, TF0, TF1),
DL_TFC2	(TF0, TF0, TF2),
DL_TFC3	(TF0, TF1, TF0),
DL_TFC4	(TF0, TF1, TF1),
DL_TFC5	(TF0, TF2, TF0),
DL_TFC6	(TF0, TF2, TF1),
DL_TFC7	(TF1, TF0, TF0)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (NOTE)	Test data size (NOTE)
1	DL_TFC7	UL_TFC0	DL_TFC0, UL_TFC0	UL_TFC0	RB8: 376 bits	RB8: 312 bits

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB8: 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.

18.3.5.3.2.4 Test requirements

See 18.3.1.1 for definition of step 15

1. At step 15 the UE shall return an RLC SDU on RB7 having the same content as 1 times plus 64 lsb's of the DL RLC SDU sent by the SS.

18.3.5.3a SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.3.5.3a.1 SRBs for PCCH at 12 kbps + SRB for CCCH + SRB for DCCH + SRB for BCCH at 32 kbps

18.3.5.3a.1.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.3a.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause for the case when one SCCPCH is used in this SYSTEM INFORMATION (BCCH) configuration. The SCCPCH carries the PCH at 12 kbps and the FACH for SRBs on CCCH/ DCCH/ BCCH at 32 kbps.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.1 (SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.3a.1.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.0b.

Uplink TFS:

	TFI	SRB
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	SRB
UL_TFC0	TF0

Downlink TFS:

	TFI	PCCH	SRBs
TFS	TF0, bits	0x240	0x171
	TF1, bits	1x240	1x171
	TF2, bits	N/A	2x171
	TF3,bits	N/A	3x171
	TF4,bits	N/A	4x171

Downlink TFCS:

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

Sub-tests:

See 18.3.1.1 for test procedure.

18.3.5.3a.1.4 Test requirements

See 18.3.1.1 for definition of step 6x

1. At step 6x the UE transmitted SECURITY MODE COMPLETE (DCCH) received at the SS shall complete the test and end gracefully.

18.3.5.3a.2 SRBs for PCCH at 8 kbps kbps + SRB for CCCH + SRB for DCCH + SRB for BCCH at 16 kbps

18.3.5.3a.2.1 Conformance requirement

See 18.3.2.4.1.

18.3.5.3a.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause for the case when one SCCPCH is used in this SYSTEM INFORMATION (BCCH) configuration. The SCCPCH carries the PCH at 8 kbps and the FACH for SRBs on CCCH/ DCCH/ BCCH at 16 kbps.

To be able to test the downlink radio bearer using the UE loopback function, the reference radio bearer configuration according to TS 34.108, clause 6.11.6.4.5.1 (SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.3.5.3a.2.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.0b.

Uplink TFS:

	TFI	SRB
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	SRB
UL_TFC0	TF0

Downlink TFS:

	TFI	PCCH	SRBs
TFS	TF0, bits	0x80	0x171
	TF1, bits	1x80	1x171
	TF2, bits	2x80	2x171

Downlink TFCS:

TFCI	(PCCH, SRB)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0, TF1)
DL_TFC2	(TF0, TF2)
DL_TFC3	(TF1, TF0)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF0)
DL_TFC6	(TF2, TF1)

Sub-tests:

See 18.3.1.1 for test procedure.

18.3.5.3a.2.4 Test requirements

See 18.3.1.1 for definition of step 6x

1. At step 6x the UE transmitted SECURITY MODE COMPLETE (DCCH) received at the SS shall complete the test and end gracefully.

18.3.5.4 RB for CTCH + SRB for CCCH +SRB for BCCH.

18.3.5.4.1 Definition and applicability

Applicable only for a UE supporting Cell Broadcast Services (CBS) as a type of Broadcast/Multicast Services.

It shall be possible to indicate the reception of certain CBS message contents carried with certain activated CG message types in a clear way on UE side.

18.3.5.4.2 Conformance Requirement

See 18.3.2.4.1 and 7.4.2.1.2.

18.3.5.4.3 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.4 for the case when three SCCPCHs are used in this SYSTEM INFORMATION configuration. The first SCCPCH carries the PCH. The second SCCPCH carries the FACH for CTCH (Cell Broadcast Service) and the FACH for SRBs on CCCH/ BCCH for idle mode UEs. The third SCCPCH carries the FACH for Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.6.4.4.3. Data transfer on CTCH is tested similar to testing BMC for a UE in idle mode as specified in TS 34.123-1, clause 7.4.2, data transfer on CCCH is tested by establishing a RRC connection.

18.3.5.4.4 Method of Test

18.3.5.4.4.1 Initial conditions:

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.2.

The UE is RRC idle mode, the BMC entity is established.

The CB message ID stored on the SIM shall be known for this test (parameter for CBS PDUs). The CBS data type shall be allocated and activated in the UE.

Related ICS/IXIT Statement(s):

As in clause 7.4.2.1.4

Uplink TFS:

	TFI	RB7+SRB (32 kbps on RACH)
TFS	TF0, bits	1x170

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0

Downlink TFS:

	TFI	RB7 (16 kbps on CTCH)	SRBs
TFS	TF0, bits	0x163	0x171
	TF1, bits	1x163	1x171
	TF2, bits	2x163	2x171

Downlink TFCS:

TFCI	(RB7, SRB)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF0, TF1)
DL_TFC2	(TF0, TF2)
DL_TFC3	(TF1, TF0)
DL_TFC4	(TF1, TF1)
DL_TFC5	(TF2, TF0)

18.3.5.4.4.2 Test Procedure:

a) The UE in RRC Idle mode is triggered to wait for the next system information. The UE is activated to receive CBS messages.

b) The UE and the SS have configured their RLC, MAC, and PHYs layers with all CB related system information.

c) The SS sends the CVS message containing an activated CGS message type according to CB-Data 1 to the UE; this shall be repeated for CPREP times (indicated by the parameter "repetition period").

d) The UE indicates in an unambiguous way, that this message was received.

e) Steps 1a → 1d in the Expected sequence are followed by the steps 2 – 6 of the test procedure according to clause 18.3.1.1.

Expected sequence

Step	Direction		Message	Comments
	UE	SS		
1a	←		SYSTEM INFORMATION	
1b				The SS waits for about 10 s to make sure, that the UE is configured to receive CBS data
1c	←		BMC CBS Message	Activated CBS message with CB Data 1 message content as described by the manufacturer. This message shall be repeated "CPREP" times, Parameter: - Message_ID, - Serial-No, - Data coding scheme, - CB-Data 1,
1d				After having received the BMC CBS message the UE shall indicate the reception of CB Data 1 in a clear way.

18.3.5.4.5 Test Requirements

At step 1d in the table above, the UE shall store and decode a received activated CBS message.

At step 5 of the test procedure according to clause 18.3.1.1 the RRC Connection shall be established.

18.3.5.5 64.8kbps RB for MTCH with 80 ms TTI

18.3.5.5.1 Conformance Requirement

The UE shall correctly receive user data on the MTCH from the peer to peer RLC entity according to the configured MTCH.

Reference(s)

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

3GPP TS 25.331 (RRC)

18.3.5.5.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.3.4.4.5.

18.3.5.5.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (64.8 kbps)
TFS	TF0, bits	0x665
	TF1, bits	1x665
	TF2, bits	2x665
	TF3, bits	3x665
	TF4, bits	4x665
	TF5, bits	5x665
	TF6, bits	6x665
	TF7, bits	7x665
	TF8, bits	8x665

Downlink TFCS:

TFCI	RB for MTCH (64.8 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)
DL_TFC3	(TF3)
DL_TFC4	(TF4)
DL_TFC5	(TF5)
DL_TFC6	(TF6)
DL_TFC7	(TF7)
DL_TFC8	(TF8)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	640
2	DL_TFC2	DL_TFC0	1288
3	DL_TFC3	DL_TFC0	1936
4	DL_TFC4	DL_TFC0	2584
5	DL_TFC5	DL_TFC0	3232
6	DL_TFC6	DL_TFC0	3880
7	DL_TFC7	DL_TFC0	4528
8	DL_TFC8	DL_TFC0	5176

NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.

18.3.5.5.4 Test Requirements

See 14.1.5 for definition of steps 8 and 12.

1. For the first sub-test: At step 8 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.

2. For the second and following sub-tests: At step 12 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 14.1.5 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.5.6 129.6 kbps RB for MTCH with 80 ms TTI

18.3.5.6.1 Conformance Requirement

See 18.3.5.5.1.

18.3.5.6.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.3.4.4.6.

18.3.5.6.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (129.6 kbps)
TFS	TF0, bits	0x664
	TF1, bits	1x664
	TF2, bits	2x664
	TF3, bits	3x664
	TF4, bits	4x664
	TF5, bits	5x664
	TF6, bits	6x664
	TF7, bits	7x664
	TF8, bits	8x664
	TF9, bits	9x664
	TF10, bits	10x664
	TF11, bits	11x664
	TF12, bits	12x664
	TF13, bits	13x664
	TF14, bits	14x664
	TF15, bits	15x664
	TF16, bits	16x664

Downlink TFCS:

TFCI	RB for MTCH (129.6 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)
DL_TFC3	(TF3)
DL_TFC4	(TF4)
DL_TFC5	(TF5)
DL_TFC6	(TF6)
DL_TFC7	(TF7)
DL_TFC8	(TF8)
DL_TFC9	(TF9)
DL_TFC10	(TF10)
DL_TFC11	(TF11)
DL_TFC12	(TF12)
DL_TFC13	(TF13)
DL_TFC14	(TF14)
DL_TFC15	(TF15)
DL_TFC16	(TF16)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	640
2	DL_TFC2	DL_TFC0	1288
3	DL_TFC3	DL_TFC0	1936
4	DL_TFC4	DL_TFC0	2584
5	DL_TFC5	DL_TFC0	3232
6	DL_TFC6	DL_TFC0	3880
7	DL_TFC7	DL_TFC0	4528
8	DL_TFC8	DL_TFC0	5176
9	DL_TFC9	DL_TFC0	5824
10	DL_TFC10	DL_TFC0	6472
11	DL_TFC11	DL_TFC0	7120
12	DL_TFC12	DL_TFC0	7768
13	DL_TFC13	DL_TFC0	8416
14	DL_TFC14	DL_TFC0	9064
15	DL_TFC15	DL_TFC0	9712
16	DL_TFC16	DL_TFC0	10360
NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.			

18.3.5.6.4 Test Requirements

See 14.1.5 for definition of steps 8 and 12.

1. For the first sub-test: At step 8 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.

2. For the second and following sub-tests: At step 12 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 14.1.5 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.5.7 259.2 kbps RB for MTCH with 40 ms TTI

18.3.5.7.1 Conformance Requirement

See 18.3.5.5.1.

18.3.5.7.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.10.3.4.4.7.

18.3.5.7.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (259.2 kbps)
TFS	TF0, bits	0x665
	TF1, bits	1x665
	TF2, bits	2x665
	TF3, bits	3x665
	TF4, bits	4x665
	TF5, bits	5x665
	TF6, bits	6x665
	TF7, bits	7x665
	TF8, bits	8x665
	TF9, bits	9x665
	TF10, bits	10x665
	TF11, bits	11x665
	TF12, bits	12x665
	TF13, bits	13x665
	TF14, bits	14x665
	TF15, bits	15x665
	TF16, bits	16x665

Downlink TFCS:

TFCI	RB for MTCH (259.2 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)
DL_TFC3	(TF3)
DL_TFC4	(TF4)
DL_TFC5	(TF5)
DL_TFC6	(TF6)
DL_TFC7	(TF7)
DL_TFC8	(TF8)
DL_TFC9	(TF9)
DL_TFC10	(TF10)
DL_TFC11	(TF11)
DL_TFC12	(TF12)
DL_TFC13	(TF13)
DL_TFC14	(TF14)
DL_TFC15	(TF15)
DL_TFC16	(TF16)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	640
2	DL_TFC2	DL_TFC0	1288
3	DL_TFC3	DL_TFC0	1936
4	DL_TFC4	DL_TFC0	2584
5	DL_TFC5	DL_TFC0	3232
6	DL_TFC6	DL_TFC0	3880
7	DL_TFC7	DL_TFC0	4528
8	DL_TFC8	DL_TFC0	5176
9	DL_TFC9	DL_TFC0	5824
10	DL_TFC10	DL_TFC0	6472
11	DL_TFC11	DL_TFC0	7120
12	DL_TFC12	DL_TFC0	7768
13	DL_TFC13	DL_TFC0	8416
14	DL_TFC14	DL_TFC0	9064
15	DL_TFC15	DL_TFC0	9712
16	DL_TFC16	DL_TFC0	10360
NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.			

18.3.5.7.4 Test Requirements

See 14.1.5 for definition of steps 8 and 12.

1. For the first sub-test: At step 8 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.

2. For the second and following sub-tests: At step 12 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 14.1.5 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.5.8 124.4kbps RB for MBSFN MTCH with 80 ms TTI

18.3.5.8.1 Conformance Requirement

The UE shall correctly receive user data on the MTCH from the peer to peer RLC entity according to the configured MTCH.

Reference(s)

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

3GPP TS 25.331 (RRC)

18.3.5.8.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.9.

18.3.5.8.3 Method of Test

See subclause 18.3.1.6 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (124.4 kbps)
TFS	TF0, bits	0x4993
	TF1, bits	1x4993
	TF2, bits	2x4993

Downlink TFCS:

TFCI	RB for MTCH (124.4 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	4960
2	DL_TFC2	DL_TFC0	9936
NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 16 bits (size of 15 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.			

18.3.5.8.4 Test Requirements

See subclause 18.3.1.6 for definition of steps 9 and 13.

1. For the first sub-test: At step 9 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.
2. For the second and following sub-tests: At step 13 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 18.2.1.6 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.5.9 320.4 kbps RB for MBSFN MTCH with 80 ms TTI

18.3.5.9.1 Conformance Requirement

See 18.3.5.8.1.

18.3.5.9.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.10.

18.3.5.9.3 Method of Test

See subclause 18.3.1.6 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (320.4 kbps)
TFS	TF0, bits	0x4289
	TF1, bits	1x4289
	TF2, bits	6x4289

Downlink TFCS:

TFCI	RB for MTCH (320.4 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	4256
2	DL_TFC2	DL_TFC0	25616
NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 16 bits (size of 15 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.			

18.3.5.9.4 Test Requirements

See subclause 18.3.1.6 for definition of steps 9 and 13.

1. For the first sub-test: At step 9 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.
2. For the second and following sub-tests: At step 13 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 18.2.1.6 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.5.10 497.6 kbps RB for MBSFN MTCH with 80 ms TTI

18.3.5.10.1 Conformance Requirement

See 18.3.5.8.1.

18.3.5.10.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.4.11.

18.3.5.10.3 Method of Test

See subclause 18.3.1.6 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (497.6 kbps)
TFS	TF0, bits	0x4993
	TF1, bits	1x4993
	TF2, bits	8x4993

Downlink TFCS:

TFCI	RB for MTCH (497.6 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (NOTE 1)
1	DL_TFC1	DL_TFC0	4960
2	DL_TFC2	DL_TFC0	39792
NOTE 1: Test data size (=DL SDU size) has been set to the N*payload size of the DL TF under test minus 16 bits (size of 15 bit length indicator and expansion bit), where N is the number of transport blocks in the transport format combination under test.			

18.3.5.10.4 Test Requirements

See subclause 18.3.1.6 for definition of steps 9 and 13.

1. For the first sub-test: At step 9 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than zero.
2. For the second and following sub-tests: At step 13 the UE shall send a UE TEST LOOP MODE 3 RLC SDU COUNTER RESPONSE with a RLC SDU counter value greater than the reported value at previous sub-test.

NOTE: For UE in UE test loop mode 3 then the RLC SDU counter value is only reset upon reception of CLOSE UE TEST LOOP message configuring UE test loop mode 3. As the generic test procedure in section 18.2.1.6 runs through all sub-tests without deactivating the UE test mode then the SS needs to check the reported counter value against the value reported at the previous sub-test.

18.3.6 Combinations on PRACH

18.3.6.1 SRB for CCCH + SRB for DCCH

The reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.5.1 is implicitly tested by the test cases 18.3.5.2b.1.

18.3.6.2 Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH

The reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.5.2 is implicitly tested by the test cases 18.3.5.2.1, 18.3.5.2.2, 18.3.5.2.3 and 18.3.5.3.

18.3.6.3 Interactive/Background 12.8 kbps PS RAB + Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH

The reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.5.3 is implicitly tested by the test cases 18.3.5.2a.1, 18.3.5.2a.2 and 18.3.5.2a.3.

18.3.7 Combinations on DPCH and HS-PDSCH

18.3.7.1 Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.1.1 Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB, UL 336bit block size

18.3.7.1.1.1 Conformance requirement

For HS-DSCH the transport block size is derived from the value signalled on the HS-SCCH. The mapping between the TFRI value and the transport block size for each mode is specified below:

Let k be the signalled TFRI value, then the corresponding HS-DSCH transport block size L_k is given by :

If k=1..510

$$L_k = \lfloor L_{\min} p^k \rfloor$$

$$p = \frac{33297}{32768}$$

$$L_{\min} = 57$$

If k = 511

$$L_k = 204000$$

If k=0, L_k indicates NULL and shall not be used to signal a transport block size in the TFRI.

Transport block sizes calculated by this formula shall equal the values indicated in Table 18.3.7.1.1.1.1

Table 18.3.7.1.1.1.1: HSDPA Transport Block Sizes for 7.68 Mcps TDD

TB index (k)	TB size [bits]	TB index (k)	TB size [bits]	TB index (k)	TB size [bits]	TB index (k)	TB size [bits]
0	NULL	128	442	256	3438	384	26709
1	57	129	449	257	3494	385	27140
2	58	130	457	258	3550	386	27578
3	59	131	464	259	3607	387	28023
4	60	132	472	260	3666	388	28476
5	61	133	479	261	3725	389	28935
6	62	134	487	262	3785	390	29402
7	63	135	495	263	3846	391	29877
8	64	136	503	264	3908	392	30360
9	65	137	511	265	3971	393	30850
10	66	138	519	266	4035	394	31348
11	67	139	528	267	4101	395	31854
12	69	140	536	268	4167	396	32368
13	70	141	545	269	4234	397	32891
14	71	142	553	270	4302	398	33422
15	72	143	562	271	4372	399	33961
16	73	144	572	272	4443	400	34509
17	74	145	581	273	4514	401	35066
18	76	146	590	274	4587	402	35633
19	77	147	600	275	4661	403	36208
20	78	148	609	276	4736	404	36792
21	79	149	619	277	4813	405	37386
22	81	150	629	278	4891	406	37990
23	82	151	639	279	4970	407	38603
24	83	152	650	280	5050	408	39226
25	85	153	660	281	5131	409	39860
26	86	154	671	282	5214	410	40503
27	87	155	682	283	5298	411	41157
28	89	156	693	284	5384	412	41822
29	90	157	704	285	5471	413	42497
30	92	158	715	286	5559	414	43183
31	93	159	727	287	5649	415	43880
32	95	160	739	288	5740	416	44588
33	96	161	751	289	5833	417	45308
34	98	162	763	290	5927	418	46040
35	99	163	775	291	6023	419	46783
36	101	164	787	292	6120	420	47538
37	103	165	800	293	6219	421	48306
38	104	166	813	294	6319	422	49085
39	106	167	826	295	6421	423	49878
40	108	168	840	296	6525	424	50683
41	109	169	853	297	6630	425	51501
42	111	170	867	298	6737	426	52333
43	113	171	881	299	6846	427	53178
44	115	172	895	300	6957	428	54036
45	117	173	910	301	7069	429	54908
46	119	174	924	302	7183	430	55795
47	120	175	939	303	7299	431	56696
48	122	176	954	304	7417	432	57611
49	124	177	970	305	7537	433	58541
50	126	178	986	306	7658	434	59486
51	128	179	1001	307	7782	435	60446
52	131	180	1018	308	7908	436	61422
53	133	181	1034	309	8035	437	62414
54	135	182	1051	310	8165	438	63421
55	137	183	1068	311	8297	439	64445
56	139	184	1085	312	8431	440	65486
57	142	185	1103	313	8567	441	66543
58	144	186	1120	314	8705	442	67617
59	146	187	1138	315	8846	443	68709
60	148	188	1157	316	8988	444	69818
61	151	189	1175	317	9134	445	70945
62	153	190	1194	318	9281	446	72091

63	156	191	1214	319	9431	447	73254
64	158	192	1233	320	9583	448	74437
65	161	193	1253	321	9738	449	75639
66	164	194	1274	322	9895	450	76860
67	166	195	1294	323	10055	451	78101
68	169	196	1315	324	10217	452	79361
69	172	197	1336	325	10382	453	80643
70	174	198	1358	326	10550	454	81945
71	177	199	1380	327	10720	455	83267
72	180	200	1402	328	10893	456	84612
73	183	201	1425	329	11069	457	85978
74	186	202	1448	330	11248	458	87366
75	189	203	1471	331	11429	459	88776
76	192	204	1495	332	11614	460	90209
77	195	205	1519	333	11801	461	91666
78	198	206	1543	334	11992	462	93145
79	201	207	1568	335	12185	463	94649
80	205	208	1594	336	12382	464	96177
81	208	209	1619	337	12582	465	97730
82	211	210	1646	338	12785	466	99308
83	215	211	1672	339	12992	467	100911
84	218	212	1699	340	13201	468	102540
85	222	213	1727	341	13414	469	104195
86	225	214	1755	342	13631	470	105877
87	229	215	1783	343	13851	471	107587
88	233	216	1812	344	14075	472	109324
89	237	217	1841	345	14302	473	111088
90	240	218	1871	346	14533	474	112882
91	244	219	1901	347	14767	475	114704
92	248	220	1932	348	15006	476	116556
93	252	221	1963	349	15248	477	118438
94	256	222	1994	350	15494	478	120350
95	260	223	2027	351	15744	479	122293
96	265	224	2059	352	15999	480	124267
97	269	225	2093	353	16257	481	126273
98	273	226	2126	354	16519	482	128312
99	278	227	2161	355	16786	483	130383
100	282	228	2196	356	17057	484	132488
101	287	229	2231	357	17332	485	134627
102	291	230	2267	358	17612	486	136800
103	296	231	2304	359	17897	487	139009
104	301	232	2341	360	18185	488	141253
105	306	233	2379	361	18479	489	143533
106	311	234	2417	362	18777	490	145850
107	316	235	2456	363	19081	491	148205
108	321	236	2496	364	19389	492	150597
109	326	237	2536	365	19702	493	153029
110	331	238	2577	366	20020	494	155499
111	337	239	2619	367	20343	495	158010
112	342	240	2661	368	20671	496	160560
113	348	241	2704	369	21005	497	163152
114	353	242	2748	370	21344	498	165786
115	359	243	2792	371	21689	499	168463
116	365	244	2837	372	22039	500	171182
117	371	245	2883	373	22395	501	173946
118	377	246	2929	374	22756	502	176754
119	383	247	2977	375	23124	503	179608
120	389	248	3025	376	23497	504	182507
121	395	249	3074	377	23876	505	185454
122	402	250	3123	378	24262	506	188447
123	408	251	3174	379	24653	507	191490
124	415	252	3225	380	25051	508	194581
125	421	253	3277	381	25456	509	197722
126	428	254	3330	382	25867	510	200914
127	435	255	3384	383	26284	511	204000

Reference(s)

3GPP TS 25.321 Section 9.2.3.2a

18.3.7.1.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.1 for the UL 336 bit block size case.

18.3.7.1.1.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (64 kbps, 20 ms TTI)	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)

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)
1	1	3	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	3	512	128					
	3	3	512	128					
	4	3	512	128					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
2	1	3	256	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	3	256	128					
	3	3	256	128					
	4	3	256	128					
	5	3	256	256					
	6	3	256	256					
	7	3	512	512					
	8	3	512	512					
	9	3	1024	512					
3	1	3	512	256	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952
	2	3	512	256					
	3	3	512	256					
	4	3	512	256					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
4	1	8	256	256	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.

18.3.7.1.1.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE transmitted transport format shall be
   - for sub-test 1: TF1 (1x336).

- for sub-test 2: TF2 (2x336).
- for sub-test 3: TF3 (3x336).
- for sub-test 4: TF4 (4x336).

3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.1.2 Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB, UL 144bit block size

18.3.7.1.2.1 Conformance requirement

See 18.3.7.1.1.1

18.3.7.1.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.1 for the UL 144 bit block size case.

18.3.7.1.2.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (64 kbps, 20 ms TTI)	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)

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)
1	1	3	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 120
	2	3	512	128					
	3	3	512	128					
	4	3	512	128					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
2	1	3	256	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 376
	2	3	256	128					
	3	3	256	128					
	4	3	256	128					
	5	3	256	256					
	6	3	256	256					
	7	3	512	512					
	8	3	512	512					
	9	3	1024	512					
3	1	3	512	256	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 888
	2	3	512	256					
	3	3	512	256					
	4	3	512	256					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
4	1	8	256	256	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.

18.3.7.1.2.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE transmitted transport format shall be
   - for sub-test 1: TF1 (1x144).

- for sub-test 2: TF2 (3x144).
- for sub-test 3: TF3 (7x144).
- for sub-test 4: TF4 (10x144).

3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.2 Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.2.1 Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB, UL 336bit block size

18.3.7.2.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.2.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.2 for the UL 336 bit block size case.

18.3.7.2.1.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3 is run for each sub-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)

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)
1	1	3	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	3	512	128					
	3	3	512	128					
	4	3	512	128					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
2	1	3	256	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	3	256	128					
	3	3	256	128					
	4	3	256	128					
	5	3	256	256					
	6	3	256	256					
	7	3	512	512					
	8	3	512	512					
	9	3	1024	512					
3	1	3	512	256	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272
	2	3	512	256					
	3	3	512	256					
	4	3	512	256					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
4	1	8	256	256	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.

18.3.7.2.1.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE transmitted transport format shall be
   - for sub-test 1: TF1 (1x336).

- for sub-test 2: TF2 (2x336).
- for sub-test 3: TF3 (4x336).
- for sub-test 4: TF4 (8x336).

3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.2.2 Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB, UL 144bit block size

18.3.7.2.2.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.2.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.2 for the UL 144 bit block size case.

18.3.7.2.2.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3 is run for each sub-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)

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)
1	1	3	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 120
	2	3	512	128					
	3	3	512	128					
	4	3	512	128					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
2	1	3	256	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 888
	2	3	256	128					
	3	3	256	128					
	4	3	256	128					
	5	3	256	256					
	6	3	256	256					
	7	3	512	512					
	8	3	512	512					
	9	3	1024	512					
3	1	3	512	256	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1784
	2	3	512	256					
	3	3	512	256					
	4	3	512	256					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
4	1	8	256	256	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.

18.3.7.2.2.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE transmitted transport format shall be
   - for sub-test 1: TF1 (1x144).

- for sub-test 2: TF2 (7x144).
- for sub-test 3: TF3 (14x144).
- for sub-test 4: TF4 (20x144).

3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.3 Interactive or background / UL:384 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.3.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.3.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.3.

18.3.7.3.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3 is run for each sub-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)

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)
1	1	3	512	128	336	UL_TFC1	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312
	2	3	512	128					
	3	3	512	128					
	4	3	512	128					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
2	1	3	256	128	656	UL_TFC2	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632
	2	3	256	128					
	3	3	256	128					
	4	3	256	128					
	5	3	256	256					
	6	3	256	256					
	7	3	512	512					
	8	3	512	512					
	9	3	1024	512					
3	1	3	512	256	336	UL_TFC3	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1272
	2	3	512	256					
	3	3	512	256					
	4	3	512	256					
	5	3	512	256					
	6	3	512	256					
	7	3	1536	512					
	8	3	1536	512					
	9	3	2047	512					
4	1	8	256	256	656	UL_TFC4	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 2552
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					
5	1	8	256	256	656	UL_TFC5	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 3832
	2	8	256	256					
	3	8	256	256					
	4	8	256	256					
	5	8	256	256					
	6	8	256	256					
	7	8	512	512					
	8	8	512	512					
	9	8	1024	512					

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.

18.3.7.3.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE transmitted transport format shall be
   - for sub-test 1: TF1 (1x336).
   - for sub-test 2: TF2 (2x336).
   - for sub-test 3: TF3 (4x336).
   - for sub-test 4: TF4 (8x336).
   - for sub-test 5: TF5 (12x336).
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.4.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.4.

18.3.7.4.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (384 kbps, 10 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	4x336	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A
	TF5, bits	N/A	N/A	N/A	12x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF5, TF0)
UL_TFC16	(TF1, TF0, TF0, TF5, TF0)
UL_TFC17	(TF2, TF1, TF1, TF5, TF0)
UL_TFC18	(TF0, TF0, TF0, TF0, TF1)
UL_TFC19	(TF1, TF0, TF0, TF0, TF1)
UL_TFC20	(TF2, TF1, TF1, TF0, TF1)
UL_TFC21	(TF0, TF0, TF0, TF1, TF1)
UL_TFC22	(TF1, TF0, TF0, TF1, TF1)
UL_TFC23	(TF2, TF1, TF1, TF1, TF1)
UL_TFC24	(TF0, TF0, TF0, TF2, TF1)
UL_TFC25	(TF1, TF0, TF0, TF2, TF1)
UL_TFC26	(TF2, TF1, TF1, TF2, TF1)
UL_TFC27	(TF0, TF0, TF0, TF3, TF1)
UL_TFC28	(TF1, TF0, TF0, TF3, TF1)
UL_TFC29	(TF2, TF1, TF1, TF3, TF1)
UL_TFC30	(TF0, TF0, TF0, TF4, TF1)
UL_TFC31	(TF1, TF0, TF0, TF4, TF1)
UL_TFC32	(TF2, TF1, TF1, TF4, TF1)
UL_TFC33	(TF0, TF0, TF0, TF5, TF1)
UL_TFC34	(TF1, TF0, TF0, TF5, TF1)
UL_TFC35	(TF2, TF1, TF1, TF5, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Speech and Interactive Background radio bearer. As the Interactive Background UL:384 kbps radio bearer (RB8) has the highest number of transport formats (5 for TTI=10 ms and excluding TF0) then 5 sub-tests has been defined. The selected UL TFCI to achieve test coverage of TF1 to TF5 for RB8 and for the different speech transport formats are: UL_TFC4 for TF1, UL_TFC8 for TF2, UL_TFC11 for TF3, UL_TFC13 for TF4 and UL_TFC17 for TF5.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	256	336	DL_TFC1	UL_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC18, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	256	656	DL_TFC2	UL_TFC8	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC8, UL_TFC18, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC2	UL_TFC11	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC11, UL_TFC18, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	DL_TFC1	UL_TFC13	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC18, UL_TFC31	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	9	3	1024	512							
5	1	3	256	256	656	DL_TFC2	UL_TFC17	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC17, UL_TFC18, UL_TFC35	RB5: 81 RB6: 103 RB7: 60 RB8: 3832	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC18 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB8: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.
NOTE 4: The test data size for RB8 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.4.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.5 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: 64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.5.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: 64 DL:[Bit rate depending on the UE category] / PS RAB, UL 336bit block size

18.3.7.5.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.5.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.5 for the UL 336 bit block size case.

18.3.7.5.1.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Speech and Interactive Background radio bearer. As the Interactive Background UL:64 kbps radio bearer (RB8) has the highest number of transport formats (4 excluding TF0) then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB8 and for the different speech transport formats are: UL_TFC4 for TF1, UL_TFC8 for TF2, UL_TFC11 for TF3 and UL_TFC13 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	DL_TFC1	UL_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	DL_TFC2	UL_TFC8	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC2	UL_TFC11	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	8	256	256	656	DL_TFC1	UL_TFC13	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	8	256	256							
	3	8	256	256							
	4	8	256	256							
	5	8	256	256							
	6	8	256	256							
	7	8	512	512							
	8	8	512	512							

	9	8	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB8: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.
NOTE 4: The test data size for RB8 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.5.1.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.5.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: 64 DL:[Bit rate depending on the UE category] / PS RAB, UL 144bit block size

18.3.7.5.2.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.5.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.5 for the UL 144 bit block size case.

18.3.7.5.2.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
RLC Transmission window size	See sub-test table
RLC Receiving window size	See sub-test table

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x144	0x148
	TF1, bits	1x39	1x103	1x60	1x144	1x148
	TF2, bits	1x81	N/A	N/A	3x144	N/A
	TF3, bits	N/A	N/A	N/A	7x144	N/A
	TF4, bits	N/A	N/A	N/A	10x144	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Speech and Interactive Background radio bearer. As the Interactive Background UL:64 kbps radio bearer (RB8) has the highest number of transport formats (4 excluding TF0) then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB8 and for the different speech transport formats are: UL_TFC4 for TF1, UL_TFC8 for TF2, UL_TFC11 for TF3 and UL_TFC13 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	DL_TFC1	UL_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 120	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	DL_TFC2	UL_TFC8	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC8, UL_TFC15, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 376	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC2	UL_TFC11	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC11, UL_TFC15, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 888	RB5: 81 RB6: 103 RB7: 60 RB8: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	8	256	256	656	DL_TFC1	UL_TFC13	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC15, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: See NOTE 4
	2	8	256	256							
	3	8	256	256							
	4	8	256	256							
	5	8	256	256							
	6	8	256	256							
	7	8	512	512							
	8	8	512	512							

	9	8	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB8: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.
NOTE 4: The test data size for RB8 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.5.2.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.6 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.6.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.6.

18.3.7.6.3 Method of test

18.3.7.6.3.1 Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC	
TM RLC	
Segmentation indication	FALSE
Transmission RLC discard	
CHOICE *SDU Discard Mode*	
Timer based no explicit	
Timer_discard	100ms
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 .	

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 384 kbps, 10 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A
	TF5, bits	N/A	12x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0,TF0,TF0)
UL_TFC1	(TF1,TF0,TF0)
UL_TFC2	(TF0,TF1,TF0)
UL_TFC3	(TF1,TF1,TF0)
UL_TFC4	(TF0,TF2,TF0)
UL_TFC5	(TF1,TF2,TF0)
UL_TFC6	(TF0,TF3,TF0)
UL_TFC7	(TF1,TF3,TF0)
UL_TFC8	(TF0,TF4,TF0)
UL_TFC9	(TF1,TF4,TF0)
UL_TFC10	(TF0,TF5,TF0)
UL_TFC11	(TF1,TF5,TF0)
UL_TFC12	(TF0,TF0,TF1)
UL_TFC13	(TF1,TF0,TF1)
UL_TFC14	(TF0,TF1,TF1)
UL_TFC15	(TF1,TF1,TF1)
UL_TFC16	(TF0,TF2,TF1)
UL_TFC17	(TF1,TF2,TF1)
UL_TFC18	(TF0,TF3,TF1)
UL_TFC19	(TF1,TF3,TF1)
UL_TFC20	(TF0,TF4,TF1)
UL_TFC21	(TF1,TF4,TF1)
UL_TFC22	(TF0,TF5,TF1)
UL_TFC23	(TF1,TF5,TF1)

Downlink TFS:

	TFI	RB5 (Conv. 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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Conversational CS and Interactive Background PS radio bearer. As the Interactive Background UL:384 kbps radio bearer (RB6) has the highest number of transport formats (5 for TTI=10 ms and excluding TF0) then 5 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF5 for RB6 and for TF1 for RB5 are: UL_TFC3 for TF1, UL_TFC5 for TF2, UL_TFC7 for TF3, UL_TFC9 for TF4 and UL_TFC11 for TF5.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	256	336	DL_TFC1	UL_TFC3	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	256	656	DL_TFC1	UL_TFC5	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC12, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC1	UL_TFC7	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC7, UL_TFC12, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	DL_TFC1	UL_TFC9	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC9, UL_TFC12, UL_TFC21	RB5: 640 RB6: 2552	RB5: 4x640 RB6: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	9	3	1024	512							
5	1	3	256	256	656	DL_TFC1	UL_TFC11	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC11, UL_TFC12, UL_TFC23	RB5: 640 RB6: 3832	RB5: 4x640 RB6: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC12 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.
NOTE 4: The test data size for RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.6.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.7 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.7.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB, UL 336bit block size

18.3.7.7.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.7.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.7 for the UL 336 bit block size case.

18.3.7.7.1.3 Method of test

18.3.7.7.1.3 Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE *SDU Discard Mode* Timer based no explicit Timer_discard	 FALSE 100ms
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 .	

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 64 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	4x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF0, TF1, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF2, TF0)
UL_TFC5	(TF1, TF2, TF0)
UL_TFC6	(TF0, TF3, TF0)
UL_TFC7	(TF1, TF3, TF0)
UL_TFC8	(TF0, TF4, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF1, TF0, TF1)
UL_TFC12	(TF0, TF1, TF1)
UL_TFC13	(TF1, TF1, TF1)
UL_TFC14	(TF0, TF2, TF1)
UL_TFC15	(TF1, TF2, TF1)
UL_TFC16	(TF0, TF3, TF1)
UL_TFC17	(TF1, TF3, TF1)
UL_TFC18	(TF0, TF4, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Conversational CS and Interactive Background PS radio bearer. As the Interactive Background UL:64 kbps radio bearer (RB6) has the highest number of transport formats (4 excluding TF0) then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB6 and for TF1 for RB5 are: UL_TFC3 for TF1, UL_TFC5 for TF2, UL_TFC7 for TF3 and UL_TFC9 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	DL_TFC1	UL_TFC3	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 312	RB5: 4x640 RB6: See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	DL_TFC1	UL_TFC5	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 632	RB5: 4x640 RB6: See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC1	UL_TFC7	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC7, UL_TFC10, UL_TFC17	RB5: 640 RB6: 952	RB5: 4x640 RB6: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	DL_TFC1	UL_TFC9	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC9, UL_TFC10, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test. NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC10 are part of minimum set of TFCIs. NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI. NOTE 4: The test data size for RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.3.7.7.1.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.7.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB, UL 144bit block size

18.3.7.7.2.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.7.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.7 for the UL 144 bit block size case.

18.3.7.7.2.3 Method of test

18.3.7.7.2.3.1 Initial Conditions

The following RLC Info parameter values shall be set by the SS for the Conversational / unknown / UL:64 DL:64 kbps / CS RAB (RB5):

	RB5 (Conv. 64 kbps)
Uplink RLC	
TM RLC	
Segmentation indication	FALSE
Transmission RLC discard	
CHOICE *SDU Discard Mode*	
Timer based no explicit	
Timer_discard	100ms
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 .	

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 64 kbps)	DCCH
TFS	TF0, bits	0x640	0x144	0x148
	TF1, bits	4x640	1x144	1x148
	TF2, bits	N/A	3x144	N/A
	TF3, bits	N/A	7x144	N/A
	TF4, bits	N/A	10x144	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF0, TF1, TF0)
UL_TFC3	(TF1, TF1, TF0)
UL_TFC4	(TF0, TF2, TF0)
UL_TFC5	(TF1, TF2, TF0)
UL_TFC6	(TF0, TF3, TF0)
UL_TFC7	(TF1, TF3, TF0)
UL_TFC8	(TF0, TF4, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF1, TF0, TF1)
UL_TFC12	(TF0, TF1, TF1)
UL_TFC13	(TF1, TF1, TF1)
UL_TFC14	(TF0, TF2, TF1)
UL_TFC15	(TF1, TF2, TF1)
UL_TFC16	(TF0, TF3, TF1)
UL_TFC17	(TF1, TF3, TF1)
UL_TFC18	(TF0, TF4, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 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:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Conversational CS and Interactive Background PS radio bearer. As the Interactive Background UL:64 kbps radio bearer (RB6) has the highest number of transport formats (4 excluding TF0) then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB6 and for TF1 for RB5 are: UL_TFC3 for TF1, UL_TFC5 for TF2, UL_TFC7 for TF3 and UL_TFC9 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	DL_TFC1	UL_TFC3	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 120	RB5: 4x640 RB6: See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	DL_TFC1	UL_TFC5	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 376	RB5: 4x640 RB6: See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	DL_TFC1	UL_TFC7	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC7, UL_TFC10, UL_TFC17	RB5: 640 RB6: 888	RB5: 4x640 RB6: See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	DL_TFC1	UL_TFC9	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC9, UL_TFC10, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test. NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC10 are part of minimum set of TFCIs. NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI. NOTE 4: The test data size for RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.3.7.7.2.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.8 Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:384 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.8.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.8.

18.3.7.8.3 Method of test

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB6 (I/B 384 kbps)	RB6 (I/B 384 kbps)	DCCH
TFS	TF0, bits	0x340	0x340	0x148
	TF1, bits	1x340	1x340	1x148
	TF2, bits	2x340	2x340	N/A
	TF3, bits	4x340	4x340	N/A
	TF4, bits	8x340	8x340	N/A
	TF5, bits	12x340	12x340	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, 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)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the 2 x Interactive Background PS radio bearer. As the 2 x Interactive Background UL:384 kbps radio bearer (RB5+RB6) have 5 transport formats then 5 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF5 for RB5+RB6 are: UL_TFC1 for TF1, UL_TFC2 for TF2, UL_TFC3 for TF3, UL_TFC4 for TF4 and UL_TFC5 for TF5.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	256	336	N/A	UL_TFC1	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	256	656	N/A	UL_TFC2	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632 RB6: 632	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	N/A	UL_TFC3	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1272 RB6: 1272	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	N/A	UL_TFC4	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 2552 RB6: 2552	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
5	1	3	256	256	656	N/A	UL_TFC5	UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 3832 RB6: 3832	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.
NOTE 2: UL_TFC0, UL_TFC1 and UL_TFC6 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5 and RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.
NOTE 4: The test data size for RB5 and RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.8.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.9 Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.9.1 Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB, UL 340bit block size

18.3.7.9.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.9.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.9 for the UL 340 bit block size case.

18.3.7.9.1.3 Method of test

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 + RB6 (64 kbps RAB, 20 ms TTI)	DCCH
TFS	TF0, bits	0x340	0x148
	TF1, bits	1x340	1x148
	TF2, bits	2x340	N/A
	TF3, bits	3x340	N/A
	TF4, bits	4x340	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, 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)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the 2 x Interactive Background PS radio bearer. As the 2 x Interactive Background UL:64 kbps radio bearer (RB5+RB6) has 4 transport formats then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB5+RB6 are: UL_TFC1 for TF1, UL_TFC2 for TF2, UL_TFC3 for TF3 and UL_TFC4 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	N/A	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312 RB6: 312	See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	N/A	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632 RB6: 632	See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	N/A	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952 RB6: 952	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	N/A	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test. NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC10 are part of minimum set of TFCIs. NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI. NOTE 4: The test data size for RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.3.7.9.1.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.9.1 Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB + Interactive or background / UL:64 DL:[Bit rate depending on the UE category] / PS RAB, UL 148bit block size

18.3.7.9.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.9.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.9 for the UL 148 bit block size case.

18.3.7.9.1.3 Method of test

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 + RB6 (64 kbps RAB, 20 ms TTI)	DCCH
TFS	TF0, bits	0x148	0x148
	TF1, bits	1x148	1x148
	TF2, bits	3x148	N/A
	TF3, bits	7x148	N/A
	TF4, bits	10x148	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, 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)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the 2 x Interactive Background PS radio bearer. As the 2 x Interactive Background UL:64 kbps radio bearer (RB5+RB6) has 4 transport formats then 4 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF4 for RB5+RB6 are: UL_TFC1 for TF1, UL_TFC2 for TF2, UL_TFC3 for TF3 and UL_TFC4 for TF4.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	N/A	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 120 RB6: 120	See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	N/A	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 376 RB6: 376	See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	N/A	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 888 RB6: 888	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	N/A	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test. NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC10 are part of minimum set of TFCIs. NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) , where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI. NOTE 4: The test data size for RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.3.7.9.1.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.10 Streaming / unknown / UL:128 DL: [guaranteed 128, max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.7.10.1 Streaming / unknown / UL:128 DL: [guaranteed 128, max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB, UL 336bit block size

18.3.7.10.1.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.10.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.10 for the UL 336 bit block size case.

18.3.7.10.1.3 Method of test

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (Streaming 128 kbps, 20ms)	RB6 (I/B 128 kbps, 20ms)	DCCH
TFS	TF0, bits	0x656	0x336	0x148
	TF1, bits	1x656	1x336	1x148
	TF2, bits	2x656	2x336	N/A
	TF3, bits	4x656	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF0, TF0)
UL_TFC3	(TF3, TF0, TF0)
UL_TFC4	(TF0, TF1, TF0)
UL_TFC5	(TF1, TF1, TF0)
UL_TFC6	(TF2, TF1, TF0)
UL_TFC7	(TF3, TF1, TF0)
UL_TFC8	(TF0, TF2, TF0)
UL_TFC9	(TF1, TF2, TF0)
UL_TFC10	(TF2, TF2, TF0)
UL_TFC11	(TF3, TF2, TF0)
UL_TFC12	(TF0, TF3, TF0)
UL_TFC13	(TF1, TF3, TF0)
UL_TFC14	(TF2, TF3, TF0)
UL_TFC15	(TF3, TF3, TF0)
UL_TFC16	(TF0, TF4, TF0)
UL_TFC17	(TF1, TF4, TF0)
UL_TFC18	(TF2, TF4, TF0)
UL_TFC19	(TF3, TF4, TF0)
UL_TFC20	(TF0, TF0, TF1)
UL_TFC21	(TF1, TF0, TF1)
UL_TFC22	(TF2, TF0, TF1)
UL_TFC23	(TF3, TF0, TF1)
UL_TFC24	(TF0, TF1, TF1)
UL_TFC25	(TF1, TF1, TF1)
UL_TFC26	(TF2, TF1, TF1)
UL_TFC27	(TF3, TF1, TF1)
UL_TFC28	(TF0, TF2, TF1)
UL_TFC29	(TF1, TF2, TF1)
UL_TFC30	(TF2, TF2, TF1)
UL_TFC31	(TF3, TF2, TF1)
UL_TFC32	(TF0, TF3, TF1)
UL_TFC33	(TF1, TF3, TF1)
UL_TFC34	(TF2, TF3, TF1)
UL_TFC35	(TF3, TF3, TF1)
UL_TFC36	(TF0, TF4, TF1)
UL_TFC37	(TF1, TF4, TF1)
UL_TFC38	(TF2, TF4, TF1)
UL_TFC39	(TF3, TF4, TF1)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Streaming + Interactive Background PS radio bearer. The Streaming UL:128 kbps + Interactive Background UL:128 kbps radio bearer (RB5+RB6) have 40 transport format combinations. As the transport formats where RB5, RB6 or DCCH has no data (TF0 for RB5, RB6 or DCCH) is considered as implicitly tested when the transport format combinations with data is tested then no specific sub-tests for those transport format combinations have been specified. The selected UL TFCI to achieve test coverage of TF1 to TF3 for RB5 and TF1 to TF4 for RB6 are: UL_TFC5 to UL_TFC7, UL_TFC9 to UL_TFC11, UL_TFC13 to UL_TFC15 and UL_TFC17 to UL_TFC19.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	N/A	UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC20, UL_TFC21	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC25	RB5: 632 RB6: 312	See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	N/A	UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC26	RB5: 1272 RB6: 312	See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	N/A	UL_TFC7	UL_TFC0, UL_TFC3, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC7, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC27	RB5: 2552 RB6: 312	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	N/A	UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC20, UL_TFC21,	RB5: 632 RB6: 632	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	8	3	512	512					UL_TFC24, UL_TFC29		
	9	3	1024	512							
5	1	3	512	256	656	N/A	UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC30	RB5: 1272 RB6: 632	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
6	1	3	256	256	656	N/A	UL_TFC11	UL_TFC0, UL_TFC3, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC8, UL_TFC11, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC31	RB5: 2552 RB6: 632	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
7	1	3	512	256	656	N/A	UL_TFC13	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC33	RB5: 632 RB6: 1272	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
8	1	3	256	256	656	N/A	UL_TFC14	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC12, UL_TFC14, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC34	RB5: 1272 RB6: 1272	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
9	1	3	512	256	656	N/A	UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC4,	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4,	RB5: 2552 RB6: 1272	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	5	3	512	256				UL_TFC20, UL_TFC6	UL_TFC12, UL_TFC15, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC35		
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
10	1	3	256	256	656	N/A	UL_TFC17	UL_TFC0, UL_TFC1, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC16, UL_TFC17, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC37	RB5: 632 RB6: 2552	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
11	1	3	512	256	656	N/A	UL_TFC18	UL_TFC0, UL_TFC8, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC16, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC38	RB5: 1272 RB6: 2552	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
12	1	3	256	256	656	N/A	UL_TFC19	UL_TFC0, UL_TFC3, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC16, UL_TFC19, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC39	RB5: 2552 RB6: 2552	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.

NOTE 2: UL_TFC0, UL_TFC1, UL_TFC4 and UL_TFC20 are part of minimum set of TFCIs. Also the transport format combinations UL_TFC21 and UL_TFC24 using TF1 on either RB5 or RB6 and TF1 on DCCH has been included in the allowed TFCs as those could happen during the sub-test.

NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5 and RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) ,where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.

NOTE 4: The test data size for RB5 and RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.10.1.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.7.10.2 Streaming / unknown / UL:128 DL: [guaranteed 128, max bit rate depending on UE category] kbps / PS RAB + Interactive or background / UL:128 DL: [max bit rate depending on UE category] / PS RAB, UL 144bit block size

18.3.7.10.2.1 Conformance requirement

See 18.3.7.1.1.1.

18.3.7.10.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.6.10 for the UL 144 bit block size case.

18.3.7.10.2.3 Method of test

The generic test procedure in 14.1.3.5 is run for each sub-test.

Uplink TFS:

	TFI	RB5 (Streaming 128 kbps, 20ms)	RB6 (I/B 128 kbps, 20ms)	DCCH
TFS	TF0, bits	0x656	0x144	0x148
	TF1, bits	1x656	1x144	1x148
	TF2, bits	2x656	7x144	N/A
	TF3, bits	4x656	14x144	N/A
	TF4, bits	N/A	20x144	N/A

Uplink TFCS:

TFCI	(RB5 + RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0)
UL_TFC2	(TF2, TF0, TF0)
UL_TFC3	(TF3, TF0, TF0)
UL_TFC4	(TF0, TF1, TF0)
UL_TFC5	(TF1, TF1, TF0)
UL_TFC6	(TF2, TF1, TF0)
UL_TFC7	(TF3, TF1, TF0)
UL_TFC8	(TF0, TF2, TF0)
UL_TFC9	(TF1, TF2, TF0)
UL_TFC10	(TF2, TF2, TF0)
UL_TFC11	(TF3, TF2, TF0)
UL_TFC12	(TF0, TF3, TF0)
UL_TFC13	(TF1, TF3, TF0)
UL_TFC14	(TF2, TF3, TF0)
UL_TFC15	(TF3, TF3, TF0)
UL_TFC16	(TF0, TF4, TF0)
UL_TFC17	(TF1, TF4, TF0)
UL_TFC18	(TF2, TF4, TF0)
UL_TFC19	(TF3, TF4, TF0)
UL_TFC20	(TF0, TF0, TF1)
UL_TFC21	(TF1, TF0, TF1)
UL_TFC22	(TF2, TF0, TF1)
UL_TFC23	(TF3, TF0, TF1)
UL_TFC24	(TF0, TF1, TF1)
UL_TFC25	(TF1, TF1, TF1)
UL_TFC26	(TF2, TF1, TF1)
UL_TFC27	(TF3, TF1, TF1)
UL_TFC28	(TF0, TF2, TF1)
UL_TFC29	(TF1, TF2, TF1)
UL_TFC30	(TF2, TF2, TF1)
UL_TFC31	(TF3, TF2, TF1)
UL_TFC32	(TF0, TF3, TF1)
UL_TFC33	(TF1, TF3, TF1)
UL_TFC34	(TF2, TF3, TF1)
UL_TFC35	(TF3, TF3, TF1)
UL_TFC36	(TF0, TF4, TF1)
UL_TFC37	(TF1, TF4, TF1)
UL_TFC38	(TF2, TF4, TF1)
UL_TFC39	(TF3, TF4, TF1)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink and downlink TFS for the Streaming + Interactive Background PS radio bearer. The Streaming UL:128 kbps + Interactive Background UL:128 kbps radio bearer (RB5+RB6) have 40 transport format combinations. As the transport formats where RB5, RB6 or DCCH has no data (TF0 for RB5, RB6 or DCCH) is considered as implicitly tested when the transport format combinations with data is tested then no specific sub-tests for those transport format combinations have been specified. The selected UL TFCI to achieve test coverage of TF1 to TF3 for RB5 and TF1 to TF4 for RB6 are: UL_TFC5 to UL_TFC7, UL_TFC9 to UL_TFC11, UL_TFC13 to UL_TFC15 and UL_TFC17 to UL_TFC19.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
1	1	3	512	128	336	N/A	UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC20, UL_TFC21	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC25	RB5: 632 RB6: 120	See NOTE 4
	2	3	512	128							
	3	3	512	128							
	4	3	512	128							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
2	1	3	256	128	656	N/A	UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC26	RB5: 1272 RB6: 120	See NOTE 4
	2	3	256	128							
	3	3	256	128							
	4	3	256	128							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
3	1	3	512	256	336	N/A	UL_TFC7	UL_TFC0, UL_TFC3, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC7, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC27	RB5: 2552 RB6: 120	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
4	1	3	256	256	656	N/A	UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC9, UL_TFC20, UL_TFC21,	RB5: 632 RB6: 888	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	8	3	512	512					UL_TFC24, UL_TFC29		
	9	3	1024	512							
5	1	3	512	256	656	N/A	UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC8, UL_TFC10, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC30	RB5: 1272 RB6: 888	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
6	1	3	256	256	656	N/A	UL_TFC11	UL_TFC0, UL_TFC3, UL_TFC8, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC8, UL_TFC11, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC31	RB5: 2552 RB6: 888	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
7	1	3	512	256	656	N/A	UL_TFC13	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC33	RB5: 632 RB6: 1784	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
8	1	3	256	256	656	N/A	UL_TFC14	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC12, UL_TFC14, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC34	RB5: 1272 RB6: 1784	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
9	1	3	512	256	656	N/A	UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC4,	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4,	RB5: 2552 RB6: 1784	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (NOTE 1)	RLC Trans-mission window size (NOTE 1)	MAC-d PDU size (bits)	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)	UL RLC SDU size (bits) (NOTE 3)	Test data size (bits) (NOTE 4)
	5	3	512	256				UL_TFC20, UL_TFC6	UL_TFC12, UL_TFC15, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC35		
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
10	1	3	256	256	656	N/A	UL_TFC17	UL_TFC0, UL_TFC1, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC16, UL_TFC17, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC37	RB5: 632 RB6: 2552	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							
11	1	3	512	256	656	N/A	UL_TFC18	UL_TFC0, UL_TFC8, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC8, UL_TFC16, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC38	RB5: 1272 RB6: 2552	See NOTE 4
	2	3	512	256							
	3	3	512	256							
	4	3	512	256							
	5	3	512	256							
	6	3	512	256							
	7	3	1536	512							
	8	3	1536	512							
	9	3	2047	512							
12	1	3	256	256	656	N/A	UL_TFC19	UL_TFC0, UL_TFC3, UL_TFC16, UL_TFC4, UL_TFC20, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC16, UL_TFC19, UL_TFC20, UL_TFC21, UL_TFC24, UL_TFC39	RB5: 2552 RB6: 2552	See NOTE 4
	2	3	256	256							
	3	3	256	256							
	4	3	256	256							
	5	3	256	256							
	6	3	256	256							
	7	3	512	512							
	8	3	512	512							
	9	3	1024	512							

NOTE 1: The SS shall configure the RLC transmission and receiver window size depending on the UE category. The values are set to cope with the number of SDUs used in the sub-test and within the UE capabilities for the actual UE category under test.

NOTE 2: UL_TFC0, UL_TFC1, UL_TFC4 and UL_TFC20 are part of minimum set of TFCIs. Also the transport format combinations UL_TFC21 and UL_TFC24 using TF1 on either RB5 or RB6 and TF1 on DCCH has been included in the allowed TFCs as those could happen during the sub-test.

NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB5 and RB6: The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit) ,where N is the number of transport blocks for the UL transport format under test. This will make the UE to return one RLC SDU per UL TTI.

NOTE 4: The test data size for RB5 and RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.3.7.10.2.4 Test requirements

See 14.1.3.5 for definition of the referenced step numbers.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 18 and for each TFRC test point:

   If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 4 RLC SDUs where the first bits of each SDU has the same content as the RLC SDUs sent by the SS in downlink. Otherwise the UE shall return 4 RLC SDUs where each SDU has the same content as the first bits of the RLC SDUs sent by the SS in downlink.

   NOTE: The generic test procedure as specified in 14.1.3.5.2 sends 4 SDUs of size (N_{PDUs} * MAC-d PDU payload size) / 4 minus 8 bits (size of 7 bit length indicator and expansion bit). For the case when the downlink SDU size is less than the configured UL SDU size then all data is returned otherwise the returned data is truncated.

18.3.8 Combinations on DPCH, HS-DSCH and E-PUCH

18.3.8.1 Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH on DCH

18.3.8.1.1 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)

18.3.8.1.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.7.1:

1. To verify that the UE is able to establish the radio bearer combination.
2. To verify correct data transfer using all the possible MAC-d PDU sizes of the transport channel mapped to E-DCH.

18.3.8.1.3 Method of test

The following parameters are specific for this test case:

Parameter	Value
MAC-hs receiver window size	16
HS-DSCH MAC-d PDU size	336

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	1536
5	1536

HS-DSCH Category	HS-PDSCH Number of HARQ processes	RLC Receiving window size	HS-PDSCH TFRC (NOTE 1)					
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	Number HS-DSCH timeslots	TFRI
1	2	512	336	357	1	QPSK	1	115
2	2	512	336	357	1	QPSK	1	115
3	3	512	336	357	1	QPSK	1	115
4	3	512	336	357	1	QPSK	1	115
5	3	512	336	357	1	QPSK	1	115
6	3	512	336	357	1	QPSK	1	115
7	3	1536	336	357	1	QPSK	1	115
8	3	1536	336	357	1	QPSK	1	115
9	3	1536	336	357	1	QPSK	1	115
10	3	1536	336	357	1	QPSK	1	115
11	3	2047	336	357	1	QPSK	1	115
12	3	2047	336	357	1	QPSK	1	115
13	3	2047	336	357	1	QPSK	1	115

NOTE 1: The HS-PDSCH TFRC should be selected to enable all test data on DTCH on HS-DSCH to be transmitted in one TTI, i.e. such that the MAC-hs transport block size is bigger than the maximum MAC-d PDU size under test + MAC-hs header size (21 bits). See 18.3.7.1.1 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 18.3.1.5 is run for each sub-test.

Sub-tests:

Sub-test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (NOTE 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (NOTE 2)	Test data size (NOTE 3)
1	1 to 7	10ms, Table 0	4	312	312

NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.
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 is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.
NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.

18.3.8.1.4 Test requirements

See 18.2.1.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE shall return a RLC SDU with same content as sent in downlink.

18.3.8.3 Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] SRBs for DCCH on E-DCH and HS-DSCH

18.3.8.3.1 Conformance requirement

See 18.3.8.1.1.

18.3.8.3.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.7.3:

1. To verify that the UE is able to establish the radio bearer combination.

2 To verify correct data transfer using all the possible MAC-d PDU sizes of the transport channel mapped to E-DCH.

18.3.8.3.3 Method of test

See 18.3.8.1.3.

18.3.8.3.4 Test requirements

See 18.3.8.1.4.

18.3.8.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.3.8.4.1 Conformance requirement

See 18.3.8.1.1.

18.3.8.4.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.7.4:

1. To verify that the UE is able to establish the radio bearer combination.

2 To verify correct data transfer using all the possible MAC-d PDU sizes of the transport channel mapped to E-DCH in combination with the possible TFCI of the conversional speech radio bearer.

18.3.8.4.3 Method of test

The following parameters are specific for this test case:

Uplink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	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	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)

Parameter	Value
MAC-hs receiver window size	16
HS-DSCH MAC-d PDU size	336

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

HS-DSCH Category	HS-PDSCH Number of HARQ processes	RLC Receiving window size	HS-PDSCH TFRC (NOTE 1)					
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	Number HS-DSCH timeslots	TFRI
1	2	512	336	357	1	QPSK	1	115
2	2	512	336	357	1	QPSK	1	115
3	3	512	336	357	1	QPSK	1	115
4	3	512	336	357	1	QPSK	1	115
5	3	512	336	357	1	QPSK	1	115
6	3	512	336	357	1	QPSK	1	115
7	3	1536	336	357	1	QPSK	1	115
8	3	1536	336	357	1	QPSK	1	115
9	3	1536	336	357	1	QPSK	1	115
10	3	1536	336	357	1	QPSK	1	115
11	3	2047	336	357	1	QPSK	1	115
12	3	2047	336	357	1	QPSK	1	115
13	3	2047	336	357	1	QPSK	1	115

NOTE 1: The HS-PDSCH TFRC should be selected to enable all test data on DTCH on HS-DSCH to be transmitted in one TTI, i.e. such that the MAC-hs transport block size is bigger than the maximum MAC-d PDU size under test + MAC-hs header size (21 bits). See 18.3.7.1.1 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 18.3.1.5 is run for each sub-test.

Sub-tests:

Sub-test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (NOTE 1)	E-DPDCH Number of HARQ processes	DCH				UL RLC SDU size (NOTE 3)	Test data size (NOTE 4)
				DL TFCS Under test	UL TFCS Under test	Implicitly tested	Restricted UL TFCIs (NOTE 2)		
1	1 to 7	10ms, Table 0	4	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
2	1 to 7	10ms, Table 0	4	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312

NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.
NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCIs.
NOTE 3: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
The UL RLC SDU size is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI.
NOTE 4: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.

18.3.8.4.4 Test requirements

See 18.2.1.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At steps 17 to 20 the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the sub-test.
3. At step 18 and for each radio bearer where test data is sent in downlink the UE shall return a RLC SDU with same content as sent in downlink. For radio bearers where no data is sent in downlink then no data shall be received in uplink.

18.3.8.5 Streaming or interactive or background / UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB + Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] / PS RAB + UL:[max bit rate depending on UE category and TTI] DL:3.4 kbps SRBs for DCCH on E-DCH and DL DCH

18.3.8.5.1 Conformance requirement

See 18.3.8.1.1.

18.3.8.5.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.6.4.7.5:

1. To verify that the UE is able to establish the radio bearer combination.
2 To verify correct data transfer using all the possible MAC-d PDU sizes of the transport channel mapped to E-DCH.

18.3.8.5.3 Method of test

The first Streaming or background or interactive / UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB is referred to as RB5 and the second Streaming or interactive or background UL:[max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps / PS RAB is referred to RB6.

The following parameters are specific for this test case and RB5 and RB6:

Parameter	Value
MAC-hs receiver window size	16
HS-DSCH MAC-d PDU size	336

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

HS-DSCH Category	HS-PDSCH Number of HARQ processes	RLC Receiving window size	HS-PDSCH TFRC (NOTE 1)					
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	Number HS-DSCH timeslots	TFRI
1	2	512	336	357	1	QPSK	1	115
2	2	512	336	357	1	QPSK	1	115
3	3	512	336	357	1	QPSK	1	115
4	3	512	336	357	1	QPSK	1	115
5	3	512	336	357	1	QPSK	1	115
6	3	512	336	357	1	QPSK	1	115
7	3	1536	336	357	1	QPSK	1	115
8	3	1536	336	357	1	QPSK	1	115
9	3	1536	336	357	1	QPSK	1	115
10	3	1536	336	357	1	QPSK	1	115
11	3	2047	336	357	1	QPSK	1	115
12	3	2047	336	357	1	QPSK	1	115
13	3	2047	336	357	1	QPSK	1	115
NOTE 1: The HS-PDSCH TFRC should be selected to enable all test data on DTCH on HS-DSCH to be transmitted in one TTI, i.e. such that the MAC-hs transport block size is bigger than the maximum MAC-d PDU size under test + MAC-hs header size (21 bits). See 18.3.7.1.1 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.								

The generic test procedure in 18.3.1.5 is run for each sub-test.

Sub-tests:

Sub-test	E-DCH Category	E-DPDCH TTI and E-TFCI Table (NOTE 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (NOTE 2)	Test data size (NOTE 2)
1	1 to 7	10ms, Table 0	4	RB5:312 RB6:312	RB5:312 RB6:312
NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B. 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 is set to N*UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit), where N is the number of transport blocks for the UL transport format under test. This will enable the UE to return the data within one UL TTI. NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.					

18.3.8.5.4 Test requirements

See 18.2.1.5 for definition of step 12 and step 18.

1. At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 18 the UE shall return a RLC SDU on RB5 and RB6 with same content as sent in downlink.