
18 Multi-Layer Functional Tests

The present clause specifies the multi-layer functional test cases that are not covered by the interoperability radio bearer test cases in clause 14 or by any other test cases in the present document.

18.1 Radio Bearer Tests for 1.28 Mcps TDD option

18.1.1 General information for radio bearer tests (1.28 Mcps TDD)

The purpose of these radio bearer test cases is to test properly the Reference Radio Bearer configurations included in TS34.108 [9], clause 6.11 for 1.28 Mcps TDD option.

The applicability of radio bearer tests is dependent on the UE uplink and downlink radio access capabilities and UE support tele- and bearer-services. See TS 34.123-2, annex B for applicability of the specific test cases.

The test procedure for radio bearer for 1.28Mcps option is identical to generic radio bearer test procedure in chap 14.

14.1.1.1 Generic radio bearer test procedure for Single RB configuration is used for generic radio bearer test procedure for single RB configuration of 1.28 Mcps TDD option.

14.1.1.2 Generic test procedure for testing multi-RB combination and simultaneous signalling is used for generic test procedure for testing multi-RB combination and simultaneous signalling of 1.28 Mcps TDD option.

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

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

18.1.1.1 Generic radio bearer test procedure for Single RB configuration

See 14.1.1 for test procedure

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

See 14.1.2 for test procedure

18.1.1.3 Generic test procedure radio bearers on MTCH

See 14.1.5 for test procedure

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

See 14.1.4 for test procedure

18.1.1.5 Generic test procedure for radio bearers on MBSFN MTCH

See 18.2.1.6 for test procedure

18.1.1.6 Generic test procedure for HS-DSCH radio bearer combinations with non-enhanced Layer 2

See 14.1.3.5 for test procedure

18.1.1.6a General information interoperability radio bearer tests for HS-DSCH

18.1.1.6a.1 HS-DSCH radio bearer test parameters

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

Table 18.1.1.6a.1.1: 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits	Supported modulations without MIMO operation	Supported modulations simultaneously with MIMO operation
Category 1	16	2	2788	11264	QPSK	Not applicable (MIMO not supported)
Category 2	16	2	2788	22528		
Category 3	16	2	2788	33792		
Category 4	16	2	5600	22528	QPSK, 16QAM	
Category 5	16	2	5600	45056		
Category 6	16	2	5600	67584		
Category 7	16	3	8416	33792		
Category 8	16	3	8416	67584		
Category 9	16	3	8416	101376		
Category 10	16	4	11226	45056		
Category 11	16	4	11226	90112		
Category 12	16	4	11226	135168		
Category 13	16	5	14043	56320		
Category 14	16	5	14043	112640		
Category 15	16	5	14043	168960		
Category 16	16	3	12636	50688		
Category 17	16	3	12636	101376		
Category 18	16	3	12636	152064		
Category 19	16	4	16856	67584		
Category 20	16	4	16856	135168		
Category 21	16	4	16856	202752		
Category 22	16	5	21076	84480		
Category 23	16	5	21076	168960		
Category 24	16	5	21076	253440		
Category 25 NOTE 1	16	3	12636	152064	QPSK, 16QAM, 64QAM	--
			8416	202752	--	QPSK, 16QAM
Category 26 NOTE 2	16	4	16856	202752	QPSK, 16QAM, 64QAM	--
			11226	270336	--	QPSK, 16QAM
Category 27 NOTE 3	16	5	21076	253440	QPSK, 16QAM, 64QAM	--
			14043	337920	--	QPSK, 16QAM
Category 28	16	3	12636	304128	QPSK, 16QAM, 64QAM	QPSK, 16QAM, 64QAM
Category 29	16	4	16856	405504		
Category 30	16	5	21076	506880		

A UE in CELL_FACH, CELL_PCH or URA_PCH state with HS-DSCH reception shall support the HS-DSCH physical layer category 9 and may support the total number of soft channel bits larger than that of the category 9 in table 5.1c. When HS-DSCH reception in CELL_FACH, CELL_PCH or URA_PCH state is configured, the octet aligned table of transport block size for the HS-DSCH physical layer category 9 shall be used (see [9]).

NOTE 1: A UE of category 25 supports the physical capabilities of categories 18. The first row of category 25 in table 5.1c specifies the capabilities when MIMO is not configured and the capabilities of category 18 apply. The second row of category 25 in table 5.1c specifies the capabilities when MIMO is configured.

NOTE 2: A UE of category 26 supports the physical capabilities of categories 21. The first row of category 26 in table 5.1c specifies the capabilities when MIMO is not configured and the capabilities of category 21 apply. The second row of category 26 in table 5.1c specifies the capabilities when MIMO is configured.

NOTE 3: A UE of category 27 supports the physical capabilities of categories 24. The first row of category 27 in table 5.1c specifies the capabilities when MIMO is not configured and the capabilities of category 24 apply. The second row of category 27 in table 5.1c specifies the capabilities when MIMO is configured.

18.1.1.6a.2 Selecting TFRC test points

18.1.1.6a.2.1 Principle for non-enhanced Layer 2

The transport format and resource combination (TFRC) is identified by the UE by the type of modulation, number of channelisation codes and the transport format and resource identifier (TFRI) signalled on the HS-SCCH.

For the HSDPA radio bearer test cases the principle for selecting typical test points for TFRC is:

1. Select one TFRC per modulation scheme and number of MAC-d PDUs.
2. For each number of MAC-d PDUs select the TFRC minimizing padding.
3. Any TFRC that would cause turbo coder irregularities should be avoided.

The problem with turbo coder regularities appears at certain coding rates. The coding rate for a certain TFRC is:

$$\text{Coding_rate} = (TB_{size} + N_{CRC}) / (N_{timeslots} N_{codes} \cdot N_{phy_bits}), \text{ where}$$

TB_{size} is the selected transport block,

N_{CRC} is the number of CRC bits,

$N_{timeslots}$ is the number of channelisation codes,

N_{codes} is the number of channelisation codes, and

N_{phy_bits} is the number physical bits per code (88 for QPSK, 172 for 16QAM and 344 for 64 QAM).

Table 18.1.1.6a.2.1 lists the coding rates that cause turbo coder irregularities. In case a candidate TFRC value is causing turbo coder irregularities then the closest higher TFRI value, which do not cause any turbo coder irregularities, is selected.

Table 18.1.1.6a.2.1: Coding rates causing degradation due to turbo coder irregularities

Coding rate	Comment
0.77-0.79	Cause loss up to 3.5 dB
0.835-0.84	Cause loss up to 1.5 dB
0.871-0.878	Cause loss up to 2 dB
0.91-0.914	Cause loss up to 2 dB

NOTE The coding rates in Table 14.2.3.2.1 is based on the simulations as described in RAN WG1 document R1-030444 (Turbo-coding and puncturing interactions on HS-DSCH in R5 HSDPA)

The selection algorithm for the TFRC test points for a certain UE category and MAC-d PDU size is:

1. Set the number of MAC-d PDUs, N_{PDU} , to 1
2. Calculate the minimum transport block size to fit the number of MAC-d PDUs.
3. If the transport block size is less or equal to the UE capability for “Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI” in Table 18.1.1.6a.3.1.1 then continue with step 4 else there is no more testing points.

4. Select the QPSK test point:
If it, for the actual UE category and for the selected transport block size, exists a TFRI for QPSK then select the TFRI that maximises the number of timeslots and number of codes per timeslot.
5. Select the 16QAM test point:
If it, for the actual UE category and for the selected transport block size, exists a TFRI for 16QAM then select the TFRI that maximises the number of timeslots and number of codes per timeslot.
6. Check that the coding rate for the selected TFRC does not cause turbo coder irregularities, see Table 18.1.1.6a.3.2.1. If the coding rate is ok then accept the testing point and continue with step 8 else continue with step 7.
7. If the coding rate is not ok then select the next higher TFRI value that corresponds to an acceptable coding rate. Calculate the transport block size correspondent to the modified TFRI values and if it is less or equal to the UE capability for “Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI” in Table 18.1.1.6a.3.1.1 then accept the testing point else skip it.
8. Increment N_PDUs. If N_PDU is less or equal to 48 then repeat from step 2 else there is no more testing points.

18.1.1.6a.2.1a Principle for enhanced Layer 2

For the combination of MAC-ehs and Fixed RLC then the same principle to select test points as for the non-enhanced Layer 2 case as described in sub-clause 14.1.3.2.1 is used (MAC-d PDU size 336 and 656 bits).

For the combination of MAC-ehs and Flexible RLC then the same TFRI test points as for the fixed MAC-d PDU size=656 bits case are used.

18.1.1.6a.3 TFRC test points for MAC-d PDU size=336

Table 18.1.1.6a.3.1: TFRC test points for UE category 1 to UE category 3 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	370	QPSK	1	5	12	
2	698	QPSK	1	9	28	
3	1037	QPSK	1	13	38	
4	1367	QPSK	1	16	45	
5	1734	QPSK	2	11	51	
6	2113	QPSK	2	13	56	
7	2380	QPSK	2	14	59	
8	2788	QPSK	2	16	63	

Table 18.1.1.6a.3.2: TFRC test points for UE category 4 to UE category 6 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	360	QPSK	1	5	9	
1	360	16QAM	1	3	9	
2	697	QPSK	1	9	22	
2	697	16QAM	1	5	22	
3	1047	QPSK	1	13	30	
3	1047	16QAM	1	7	30	
4	1420	QPSK	2	9	36	
4	1420	16QAM	1	9	36	
5	1740	QPSK	2	11	40	
5	1740	16QAM	1	11	40	
6	2132	QPSK	2	13	44	
6	2132	16QAM	1	13	44	
7	2484	QPSK	2	15	47	
7	2484	16QAM	1	15	47	
8	2749	QPSK	2	16	49	
8	2749	16QAM	1	16	49	
9	3202	16QAM	2	10	52	
10	3544	16QAM	2	11	54	
11	3729	16QAM	2	11	55	
12	4128	16QAM	2	12	57	
13	4570	16QAM	2	14	59	
14	4808	16QAM	2	14	60	
15	5322	16QAM	2	16	62	
16	5600	16QAM	2	16	63	

Table 18.1.1.6a.3.3: TFRC test points for UE category 7 to UE category 9 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	358	QPSK	1	5	8	
1	358	16QAM	1	3	8	
2	713	QPSK	1	9	20	
2	713	16QAM	1	5	20	
3	1066	QPSK	1	13	27	
3	1066	16QAM	1	7	27	
4	1421	QPSK	2	9	32	
4	1421	16QAM	1	9	32	
5	1787	QPSK	2	11	36	
5	1787	16QAM	1	11	36	
6	2123	QPSK	2	13	39	
6	2123	16QAM	1	13	39	
7	2381	QPSK	2	14	41	
7	2381	16QAM	1	14	41	
8	2829	QPSK	3	11	44	
8	2829	16QAM	2	9	44	
9	3173	QPSK	3	13	46	
9	3173	16QAM	2	10	46	
10	3559	QPSK	3	14	48	
10	3559	16QAM	2	11	48	
11	3769	QPSK	3	15	49	
11	3769	16QAM	2	11	49	
12	4227	16QAM	2	13	51	
13	4477	16QAM	2	13	52	
14	4741	16QAM	2	14	53	
15	5318	16QAM	2	16	55	
16	5632	16QAM	3	11	56	
17	5964	16QAM	3	12	57	
18	6317	16QAM	3	13	58	
19	6690	16QAM	3	13	59	
20	7085	16QAM	3	14	60	
21	7085	16QAM	3	14	60	
22	7503	16QAM	3	15	61	
23	7946	16QAM	3	16	62	
24	8416	16QAM	3	16	63	

Table 18.1.1.6a.3.4: TFRC test points for UE category 10 to UE category 12 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	370	QPSK	1	5	8	
1	370	16QAM	1	3	8	
2	732	QPSK	1	9	19	
2	732	16QAM	1	5	19	
3	1063	QPSK	1	13	25	
3	1063	16QAM	1	7	25	
4	1449	QPSK	2	9	30	
4	1449	16QAM	1	9	30	
5	1746	QPSK	2	11	33	
5	1746	16QAM	1	11	33	
6	2103	QPSK	2	13	36	
6	2103	16QAM	1	13	36	
7	2381	QPSK	2	14	38	
7	2381	16QAM	1	14	38	
8	2868	QPSK	3	11	41	
8	2868	16QAM	2	9	41	
9	3051	QPSK	3	12	42	
9	3051	16QAM	2	9	42	
10	3455	QPSK	3	14	44	
10	3455	16QAM	2	10	44	
11	3911	QPSK	3	15	46	
11	3911	16QAM	2	12	46	
12	4161	QPSK	3	16	47	
12	4161	16QAM	2	12	47	
13	4427	QPSK	4	13	48	
13	4427	16QAM	2	13	48	
14	5012	QPSK	4	15	50	
14	5012	16QAM	2	15	50	
15	5333	QPSK	4	16	51	
15	5333	16QAM	2	16	51	
16	5674	16QAM	3	11	52	
17	6037	16QAM	3	12	53	
18	6424	16QAM	3	13	54	
19	6424	16QAM	3	13	54	
20	6835	16QAM	3	14	55	
21	7272	16QAM	3	14	56	
22	7737	16QAM	3	15	57	
23	8232	16QAM	3	16	58	
24	8232	16QAM	3	16	58	
25	8759	16QAM	4	13	59	
26	8759	16QAM	4	13	59	
27	9320	16QAM	4	14	60	
28	9916	16QAM	4	15	61	
29	9916	16QAM	4	15	61	
30	10550	16QAM	4	16	62	
31	10550	16QAM	4	16	62	
32	11226	16QAM	4	16	63	
33	11226	16QAM	4	16	63	

Table 18.1.1.6a.3.5: TFRC test points for UE category 13 to UE category 15 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	380	QPSK	1	5	8	
1	380	16QAM	1	3	8	
2	732	QPSK	1	9	18	
2	732	16QAM	1	5	18	
3	1086	QPSK	1	13	24	
3	1086	16QAM	1	7	24	
4	1412	QPSK	2	9	28	
4	1412	16QAM	1	9	28	
5	1719	QPSK	2	10	31	
5	1719	16QAM	1	10	31	
6	2094	QPSK	2	13	34	
6	2094	16QAM	1	13	34	
7	2388	QPSK	2	14	36	
7	2388	16QAM	1	14	36	
8	2723	QPSK	2	16	38	
8	2723	16QAM	1	16	38	
9	3105	QPSK	3	12	40	
9	3105	16QAM	2	9	40	
10	3541	QPSK	3	14	42	
10	3541	16QAM	2	11	42	
11	3781	QPSK	3	15	43	
11	3781	16QAM	2	11	43	
12	4311	QPSK	4	13	45	
12	4311	16QAM	2	13	45	
13	4604	QPSK	4	14	46	
13	4604	16QAM	2	14	46	
14	4916	QPSK	4	15	47	
14	4916	16QAM	2	15	47	
15	5250	QPSK	4	16	48	
15	5250	16QAM	2	16	48	
16	5606	QPSK	5	13	49	
16	5606	16QAM	3	11	49	
17	5987	QPSK	5	14	50	
17	5987	16QAM	3	12	50	
18	6393	QPSK	5	15	51	
18	6393	16QAM	3	13	51	
19	6827	QPSK	5	16	52	
19	6827	16QAM	3	13	52	
20	6827	QPSK	5	16	52	
20	6827	16QAM	3	13	52	
21	7290	16QAM	3	14	53	
22	7785	16QAM	3	15	54	
23	7785	16QAM	3	15	54	
24	8313	16QAM	3	16	55	
25	8877	16QAM	4	13	56	
26	8877	16QAM	4	13	56	
27	9479	16QAM	4	14	57	
28	9479	16QAM	4	14	57	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
29	10123	16QAM	4	15	58	
30	10123	16QAM	4	15	58	
31	10809	16QAM	4	16	59	
32	10809	16QAM	4	16	59	
33	11543	16QAM	5	14	60	
34	11543	16QAM	5	14	60	
35	12326	16QAM	5	15	61	
36	12326	16QAM	5	15	61	
37	13162	16QAM	5	15	62	
38	13162	16QAM	5	15	62	
39	13162	16QAM	5	15	62	
40	14043	16QAM	5	16	63	
41	14043	16QAM	5	16	63	

18.1.1.6a.4 TFRC test points for MAC-d PDU size=656

Table 18.1.1.6a.4.1: TFRC test points for UE category 1 to UE category 3 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	698	QPSK	1	9	28	
2	1367	QPSK	1	16	45	
3	2031	QPSK	2	12	55	
4	2679	QPSK	2	16	62	

Table 18.1.1.6a.4.2: TFRC test points for UE category 4 to UE category 6 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	697	QPSK	1	9	22	
1	697	16QAM	1	5	22	
2	1350	QPSK	1	16	35	
2	1350	16QAM	1	8	35	
3	2027	QPSK	2	12	43	
3	2027	16QAM	1	12	43	
4	2749	QPSK	2	16	49	
4	2749	16QAM	1	16	49	
5	3369	16QAM	2	10	53	
6	4128	16QAM	2	12	57	
7	4808	16QAM	2	14	60	
8	5322	16QAM	2	16	62	

Table 18.1.1.6a.4.3: TFRC test points for UE category 7 to UE category 9 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	713	QPSK	1	9	20	
1	713	16QAM	1	5	20	
2	1341	QPSK	1	16	31	
2	1341	16QAM	1	8	31	
3	2005	QPSK	2	12	38	
3	2005	16QAM	1	12	38	
4	2671	QPSK	2	16	43	
4	2671	16QAM	1	16	43	
5	3360	QPSK	3	13	47	
5	3360	16QAM	2	10	47	
6	3991	QPSK	3	16	50	
6	3991	16QAM	2	12	50	
7	4741	16QAM	2	14	53	
8	5318	16QAM	2	16	55	
9	5964	16QAM	3	12	57	
10	6690	16QAM	3	13	59	
11	7503	16QAM	3	15	61	
12	7946	16QAM	3	16	62	

Table 18.1.1.6a.4.4: TFRC test points for UE category 10 to UE category 12 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	688	QPSK	1	9	18	
1	688	16QAM	1	5	18	
2	1362	QPSK	1	16	29	
2	1362	16QAM	1	8	29	
3	2103	QPSK	2	13	36	
3	2103	16QAM	1	13	36	
4	2695	QPSK	2	16	40	
4	2695	16QAM	1	16	40	
5	3455	QPSK	3	14	44	
5	3455	16QAM	2	10	44	
6	4161	QPSK	3	16	47	
6	4161	16QAM	2	12	47	
7	4711	QPSK	4	14	49	
7	4711	16QAM	2	14	49	
8	5333	QPSK	4	16	51	
8	5333	16QAM	2	16	51	
9	6037	16QAM	3	12	53	
10	6835	16QAM	3	14	55	
11	7272	16QAM	3	14	56	
12	8232	16QAM	3	16	58	
13	8759	16QAM	4	13	59	
14	9320	16QAM	4	14	60	
15	9916	16QAM	4	15	61	
16	10550	16QAM	4	16	62	
17	11226	16QAM	4	16	63	

Table 18.1.1.6a.4.5: TFRC test points for UE category 13 to UE category 15 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	686	QPSK	1	9	17	
1	686	16QAM	1	5	17	
2	1412	QPSK	2	9	28	
2	1412	16QAM	1	9	28	
3	2094	QPSK	2	13	34	
3	2094	16QAM	1	13	34	
4	2723	QPSK	2	16	38	
4	2723	16QAM	1	16	38	
5	3316	QPSK	3	13	41	
5	3316	16QAM	2	10	41	
6	4037	QPSK	3	16	44	
6	4037	16QAM	2	12	44	
7	4916	QPSK	4	15	47	
7	4916	16QAM	2	15	47	
8	5606	QPSK	5	13	49	
8	5606	16QAM	3	11	49	
9	5987	QPSK	5	14	50	
9	5987	16QAM	3	12	50	
10	6827	QPSK	5	16	52	
10	6827	16QAM	3	13	52	
11	7290	16QAM	3	14	53	
12	8313	16QAM	3	16	55	
13	8877	16QAM	4	13	56	
14	9479	16QAM	4	14	57	
15	10123	16QAM	4	15	58	
16	10809	16QAM	4	16	59	
17	11543	16QAM	5	14	60	
18	12326	16QAM	5	15	61	
19	13162	16QAM	5	15	62	
20	13162	16QAM	5	15	62	
21	14043	16QAM	5	16	63	

18.1.1.6a.5 TFRC test points for MAC-ehs with fixed MAC-d PDU size=336

Table 18.1.1.6a.5.1: TFRC test points for UE category 1 to UE category 3 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	368	QPSK	1	5	12	
2	696	QPSK	1	9	28	
3	1032	QPSK	1	13	38	
4	1416	QPSK	2	9	46	
5	1728	QPSK	2	10	51	
6	2104	QPSK	2	13	56	
7	2376	QPSK	2	14	59	
8	2784	QPSK	2	16	63	

Table 18.1.1.6a.5.2: TFRC test points for UE category 4 to UE category 6 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	360	QPSK	1	5	9	
1	360	16QAM	1	3	9	
2	696	QPSK	1	9	22	
2	696	16QAM	1	5	22	
3	1040	QPSK	1	13	30	
3	1040	16QAM	1	7	30	
4	1416	QPSK	2	9	36	
4	1416	16QAM	1	9	36	
5	1736	QPSK	2	11	40	
5	1736	16QAM	1	11	40	
6	2128	QPSK	2	13	44	
6	2128	16QAM	1	13	44	
7	2480	QPSK	2	15	47	
7	2480	16QAM	1	15	47	
8	2744	QPSK	2	16	49	
8	2744	16QAM	1	16	49	
9	3200	16QAM	2	10	52	
10	3544	16QAM	2	11	54	
11	3728	16QAM	2	11	55	
12	4128	16QAM	2	12	57	
13	4568	16QAM	2	14	59	
14	4808	16QAM	2	14	60	
15	5320	16QAM	2	16	62	
16	5600	16QAM	2	16	63	

Table 18.1.1.6a.5.3: TFRC test points for UE category 7 to UE category 9 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	368	QPSK	1	5	9	
1	368	16QAM	1	3	9	
2	712	QPSK	1	9	20	
2	712	16QAM	1	5	20	
3	1064	QPSK	1	13	27	
3	1064	16QAM	1	7	27	
4	1416	QPSK	2	9	32	
4	1416	16QAM	1	9	32	
5	1784	QPSK	2	11	36	
5	1784	16QAM	1	11	36	
6	2120	QPSK	2	13	39	
6	2120	16QAM	1	13	39	
7	2376	QPSK	2	14	41	
7	2376	16QAM	1	14	41	
8	2824	QPSK	3	11	44	
8	2824	16QAM	2	9	44	
9	3168	QPSK	3	13	46	
9	3168	16QAM	2	10	46	
10	3552	QPSK	3	14	48	
10	3552	16QAM	2	11	48	
11	3768	QPSK	3	15	49	
11	3768	16QAM	2	11	49	
12	4224	16QAM	2	13	51	
13	4472	16QAM	2	13	52	
14	4736	16QAM	2	14	53	
15	5312	16QAM	2	16	55	
16	5632	16QAM	3	11	56	
17	5960	16QAM	3	12	57	
18	6312	16QAM	3	13	58	
19	6688	16QAM	3	13	59	
20	7080	16QAM	3	14	60	
21	7080	16QAM	3	14	60	
22	7496	16QAM	3	15	61	
23	7944	16QAM	3	16	62	
24	8416	16QAM	3	16	63	

Table 18.1.1.6a.5.4: TFRC test points for UE category 10 to UE category 12 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	376	QPSK	1	5	9	
1	376	16QAM	1	3	9	
2	728	QPSK	1	9	19	
2	728	16QAM	1	5	19	
3	1056	QPSK	1	13	25	
3	1056	16QAM	1	7	25	
4	1448	QPSK	2	9	30	
4	1448	16QAM	1	9	30	
5	1744	QPSK	2	11	33	
5	1744	16QAM	1	11	33	
6	2096	QPSK	2	13	36	
6	2096	16QAM	1	13	36	
7	2376	QPSK	2	14	38	
7	2376	16QAM	1	14	38	
8	2864	QPSK	3	11	41	
8	2864	16QAM	2	9	41	
9	3048	QPSK	3	12	42	
9	3048	16QAM	2	9	42	
10	3448	QPSK	3	14	44	
10	3448	16QAM	2	10	44	
11	3904	QPSK	3	15	46	
11	3904	16QAM	2	12	46	
12	4160	QPSK	3	16	47	
12	4160	16QAM	2	12	47	
13	4424	QPSK	4	13	48	
13	4424	16QAM	2	13	48	
14	5008	QPSK	4	15	50	
14	5008	16QAM	2	15	50	
15	5328	QPSK	4	16	51	
15	5328	16QAM	2	16	51	
16	5672	16QAM	3	11	52	
17	6032	16QAM	3	12	53	
18	6416	16QAM	3	13	54	
19	6416	16QAM	3	13	54	
20	6832	16QAM	3	13	55	
21	7264	16QAM	3	14	56	
22	7736	16QAM	3	15	57	
23	8224	16QAM	3	16	58	
24	8224	16QAM	3	16	58	
25	8752	16QAM	4	13	59	
26	9312	16QAM	4	14	60	
27	9312	16QAM	4	14	60	
28	9912	16QAM	4	15	61	
29	9912	16QAM	4	15	61	
30	10544	16QAM	4	16	62	
31	10544	16QAM	4	16	62	
32	11224	16QAM	4	16	63	
33	11224	16QAM	4	16	63	

Table 18.1.1.6a.5.5: TFRC test points for UE category 13 to UE category 15 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	392	QPSK	1	5	9	
1	392	16QAM	1	3	9	
2	728	QPSK	1	9	18	
2	728	16QAM	1	5	18	
3	1080	QPSK	1	13	24	
3	1080	16QAM	1	7	24	
4	1408	QPSK	2	9	28	
4	1408	16QAM	1	9	28	
5	1712	QPSK	2	10	31	
5	1712	16QAM	1	10	31	
6	2088	QPSK	2	13	34	
6	2088	16QAM	1	13	34	
7	2384	QPSK	2	14	36	
7	2384	16QAM	1	14	36	
8	2720	QPSK	2	16	38	
8	2720	16QAM	1	16	38	
9	3096	QPSK	3	12	40	
9	3096	16QAM	2	9	40	
10	3536	QPSK	3	14	42	
10	3536	16QAM	2	11	42	
11	3776	QPSK	3	15	43	
11	3776	16QAM	2	11	43	
12	4304	QPSK	4	13	45	
12	4304	16QAM	2	13	45	
13	4600	QPSK	4	14	46	
13	4600	16QAM	2	14	46	
14	4912	QPSK	4	15	47	
14	4912	16QAM	2	15	47	
15	5240	QPSK	4	15	48	
15	5240	16QAM	2	15	48	
16	5600	QPSK	4	16	49	
16	5600	16QAM	2	16	49	
17	5976	QPSK	5	14	50	
17	5976	16QAM	3	12	50	
18	6384	QPSK	5	15	51	
18	6384	16QAM	3	13	51	
19	6816	QPSK	5	16	52	
19	6816	16QAM	3	13	52	
20	6816	QPSK	5	16	52	
20	6816	16QAM	3	13	52	
21	7280	16QAM	3	14	53	
22	7776	16QAM	3	15	54	
23	7776	16QAM	3	15	54	
24	8304	16QAM	3	16	55	
25	8864	16QAM	4	13	56	
26	8864	16QAM	4	13	56	
27	9464	16QAM	4	14	57	
28	9464	16QAM	4	14	57	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
29	10112	16QAM	4	15	58	
30	10112	16QAM	4	15	58	
31	10792	16QAM	4	16	59	
32	10792	16QAM	4	16	59	
33	11528	16QAM	5	14	60	
34	11528	16QAM	5	14	60	
35	12312	16QAM	5	15	61	
36	12312	16QAM	5	15	61	
37	13144	16QAM	5	15	62	
38	13144	16QAM	5	15	62	
39	13144	16QAM	5	15	62	
40	14040	16QAM	5	16	63	
41	14040	16QAM	5	16	63	

Table 18.1.1.6a.5.6: TFRC test points for UE category 16 to UE category 18 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	384	QPSK	1	5	9	
1	384	16QAM	1	3	9	
1	384	64QAM	1	2	9	
2	704	QPSK	1	9	18	
2	704	16QAM	1	5	18	
2	704	64QAM	1	3	18	
3	1040	QPSK	1	13	24	
3	1040	16QAM	1	7	24	
3	1040	64QAM	1	5	24	
4	1432	QPSK	2	9	29	
4	1432	16QAM	1	9	29	
4	1432	64QAM	1	6	29	
5	1736	QPSK	2	11	32	
5	1736	16QAM	1	11	32	
5	1736	64QAM	1	7	32	
6	2104	QPSK	2	13	35	
6	2104	16QAM	1	13	35	
6	2104	64QAM	1	9	35	
7	2392	QPSK	2	14	37	
7	2392	16QAM	1	14	37	
7	2392	64QAM	1	10	37	
8	2720	QPSK	2	16	39	
8	2720	16QAM	1	16	39	
8	2720	64QAM	1	11	39	
9	3088	QPSK	3	12	41	
9	3088	16QAM	2	9	41	
9	3088	64QAM	1	12	41	
10	3512	QPSK	3	14	43	
10	3512	16QAM	2	11	43	
10	3512	64QAM	1	14	43	
11	3744	QPSK	3	15	44	
11	3744	16QAM	2	11	44	
11	3744	64QAM	1	15	44	
12	4256	16QAM	2	13	46	
12	4256	64QAM	2	9	46	
13	4536	16QAM	2	13	47	
13	4536	64QAM	2	9	47	
14	4840	16QAM	2	14	48	
14	4840	64QAM	2	10	48	
15	5160	16QAM	2	15	49	
15	5160	64QAM	2	10	49	
16	5496	16QAM	2	16	50	
16	5496	64QAM	2	11	50	
17	5864	16QAM	3	12	51	
17	5864	64QAM	2	12	51	
18	6248	16QAM	3	12	52	
18	6248	64QAM	2	12	52	
19	6664	16QAM	3	13	53	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
19	6664	64QAM	2	13	53	
20	7104	16QAM	3	14	54	
20	7104	64QAM	2	14	54	
21	7104	16QAM	3	14	54	
21	7104	64QAM	2	14	54	
22	7568	16QAM	3	15	55	
22	7568	64QAM	2	15	55	
23	8072	16QAM	3	16	56	
23	8072	64QAM	2	16	56	
24	8600	64QAM	3	11	57	
25	8600	64QAM	3	11	57	
26	9176	64QAM	3	12	58	
27	9176	64QAM	3	12	58	
28	9776	64QAM	3	13	59	
29	9776	64QAM	3	13	59	
30	10424	64QAM	3	14	60	
31	11112	64QAM	3	15	61	
32	11112	64QAM	3	15	61	
33	11112	64QAM	3	15	61	
34	11848	64QAM	3	16	62	
35	11848	64QAM	3	16	62	
36	12632	64QAM	3	16	63	
37	12632	64QAM	3	16	63	

Table 18.1.1.6a.5.7: TFRC test points for UE category 19 to UE category 21 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	360	QPSK	1	5	8	
1	360	16QAM	1	3	8	
1	360	64QAM	1	2	8	
2	712	QPSK	1	9	17	
2	712	16QAM	1	5	17	
2	712	64QAM	1	3	17	
3	1080	QPSK	1	13	23	
3	1080	16QAM	1	7	23	
3	1080	64QAM	1	5	23	
4	1424	QPSK	2	9	27	
4	1424	16QAM	1	9	27	
4	1424	64QAM	1	6	27	
5	1752	QPSK	2	11	30	
5	1752	16QAM	1	11	30	
5	1752	64QAM	1	7	30	
6	2152	QPSK	2	13	33	
6	2152	16QAM	1	13	33	
6	2152	64QAM	1	9	33	
7	2464	QPSK	2	15	35	
7	2464	16QAM	1	15	35	
7	2464	64QAM	1	10	35	
8	2832	QPSK	3	11	37	
8	2832	16QAM	2	9	37	
8	2832	64QAM	1	11	37	
9	3248	QPSK	3	13	39	
9	3248	16QAM	2	10	39	
9	3248	64QAM	1	13	39	
10	3480	QPSK	3	14	40	
10	3480	16QAM	2	10	40	
10	3480	64QAM	1	14	40	
11	3728	QPSK	3	15	41	
11	3728	16QAM	2	11	41	
11	3728	64QAM	1	15	41	
12	4272	QPSK	4	13	43	
12	4272	16QAM	2	13	43	
12	4272	64QAM	2	9	43	
13	4576	QPSK	4	14	44	
13	4576	16QAM	2	14	44	
13	4576	64QAM	2	9	44	
14	4904	QPSK	4	15	45	
14	4904	16QAM	2	15	45	
14	4904	64QAM	2	10	45	
15	5248	QPSK	4	15	46	
15	5248	16QAM	2	15	46	
15	5248	64QAM	2	10	46	
16	5624	16QAM	3	11	47	
16	5624	64QAM	2	11	47	
17	6024	16QAM	3	12	48	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
17	6024	64QAM	2	12	48	
18	6448	16QAM	3	13	49	
18	6448	64QAM	2	13	49	
19	6448	16QAM	3	13	49	
19	6448	64QAM	2	13	49	
20	6904	16QAM	3	14	50	
20	6904	64QAM	2	14	50	
21	7400	16QAM	3	15	51	
21	7400	64QAM	2	15	51	
22	7920	16QAM	3	16	52	
22	7920	64QAM	2	16	52	
23	7920	16QAM	3	16	52	
23	7920	64QAM	2	16	52	
24	8488	16QAM	4	13	53	
24	8488	64QAM	3	11	53	
25	8488	16QAM	4	13	53	
25	8488	64QAM	3	11	53	
26	9088	16QAM	4	13	54	
26	9088	64QAM	3	12	54	
27	9736	16QAM	4	14	55	
27	9736	64QAM	3	13	55	
28	9736	16QAM	4	14	55	
28	9736	64QAM	3	13	55	
29	10424	16QAM	4	15	56	
29	10424	64QAM	3	14	56	
30	10424	16QAM	4	15	56	
30	10424	64QAM	3	14	56	
31	11168	16QAM	4	16	57	
31	11168	64QAM	3	15	57	
32	11168	16QAM	4	16	57	
32	11168	64QAM	3	15	57	
33	11168	16QAM	4	16	57	
33	11168	64QAM	3	15	57	
34	11960	64QAM	3	16	58	
35	11960	64QAM	3	16	58	
36	12808	64QAM	4	13	59	
37	12808	64QAM	4	13	59	
38	12808	64QAM	4	13	59	
39	13720	64QAM	4	14	60	
40	13720	64QAM	4	14	60	
41	14688	64QAM	4	14	61	
42	14688	64QAM	4	14	61	
43	14688	64QAM	4	14	61	
44	15736	64QAM	4	15	62	
45	15736	64QAM	4	15	62	
46	15736	64QAM	4	15	62	
47	16856	64QAM	4	16	63	
48	16856	64QAM	4	16	63	
49	16856	64QAM	4	16	63	
50	16856	64QAM	4	16	63	

Table 18.1.1.6a.5.8: TFRC test points for UE category 22 to UE category 24 for MAC-d PDU size=336

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	376	QPSK	1	5	8	
1	376	16QAM	1	3	8	
1	376	64QAM	1	2	8	
2	704	QPSK	1	9	16	
2	704	16QAM	1	5	16	
2	704	64QAM	1	3	16	
3	1088	QPSK	1	13	22	
3	1088	16QAM	1	7	22	
3	1088	64QAM	1	5	22	
4	1456	QPSK	2	9	26	
4	1456	16QAM	1	9	26	
4	1456	64QAM	1	6	26	
5	1808	QPSK	2	11	29	
5	1808	16QAM	1	11	29	
5	1808	64QAM	1	7	29	
6	2088	QPSK	2	13	31	
6	2088	16QAM	1	13	31	
6	2088	64QAM	1	9	31	
7	2416	QPSK	2	14	33	
7	2416	16QAM	1	14	33	
7	2416	64QAM	1	10	33	
8	2792	QPSK	3	11	35	
8	2792	16QAM	2	9	35	
8	2792	64QAM	1	11	35	
9	3224	QPSK	3	13	37	
9	3224	16QAM	2	10	37	
9	3224	64QAM	1	13	37	
10	3464	QPSK	3	14	38	
10	3464	16QAM	2	10	38	
10	3464	64QAM	1	14	38	
11	3720	QPSK	3	15	39	
11	3720	16QAM	2	11	39	
11	3720	64QAM	1	15	39	
12	4304	QPSK	4	13	41	
12	4304	16QAM	2	13	41	
12	4304	64QAM	2	9	41	
13	4624	QPSK	4	14	42	
13	4624	16QAM	2	14	42	
13	4624	64QAM	2	9	42	
14	4968	QPSK	4	15	43	
14	4968	16QAM	2	15	43	
14	4968	64QAM	2	10	43	
15	5344	QPSK	4	16	44	
15	5344	16QAM	2	16	44	
15	5344	64QAM	2	11	44	
16	5744	QPSK	5	14	45	
16	5744	16QAM	3	11	45	
16	5744	64QAM	2	11	45	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
17	5744	QPSK	5	14	45	
17	5744	16QAM	3	11	45	
17	5744	64QAM	2	11	45	
18	6176	QPSK	5	15	46	
18	6176	16QAM	3	12	46	
18	6176	64QAM	2	12	46	
19	6632	QPSK	5	16	47	
19	6632	16QAM	3	13	47	
19	6632	64QAM	2	13	47	
20	7136	16QAM	3	14	48	
20	7136	64QAM	2	14	48	
21	7136	16QAM	3	14	48	
21	7136	64QAM	2	14	48	
22	7664	16QAM	3	15	49	
22	7664	64QAM	2	15	49	
23	8240	16QAM	3	16	50	
23	8240	64QAM	2	16	50	
24	8240	16QAM	3	16	50	
24	8240	64QAM	2	16	50	
25	8856	16QAM	4	13	51	
25	8856	64QAM	3	12	51	
26	8856	16QAM	4	13	51	
26	8856	64QAM	3	12	51	
27	9520	16QAM	4	14	52	
27	9520	64QAM	3	13	52	
28	9520	16QAM	4	14	52	
28	9520	64QAM	3	13	52	
29	10232	16QAM	4	15	53	
29	10232	64QAM	3	13	53	
30	10232	16QAM	4	15	53	
30	10232	64QAM	3	13	53	
31	11000	16QAM	4	16	54	
31	11000	64QAM	3	14	54	
32	11000	16QAM	4	16	54	
32	11000	64QAM	3	14	54	
33	11824	16QAM	5	14	55	
33	11824	64QAM	3	15	55	
34	11824	16QAM	5	14	55	
34	11824	64QAM	3	15	55	
35	11824	16QAM	5	14	55	
35	11824	64QAM	3	15	55	
36	12712	16QAM	5	15	56	
36	12712	64QAM	4	13	56	
37	12712	16QAM	5	15	56	
37	12712	64QAM	4	13	56	
38	13664	16QAM	5	16	57	
38	13664	64QAM	4	13	57	
39	13664	16QAM	5	16	57	
39	13664	64QAM	4	13	57	
40	13664	16QAM	5	16	57	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
40	13664	64QAM	4	13	57	
41	14688	64QAM	4	14	58	
42	14688	64QAM	4	14	58	
43	14688	64QAM	4	14	58	
44	15784	64QAM	4	15	59	
45	15784	64QAM	4	15	59	
46	15784	64QAM	4	15	59	
47	16968	64QAM	5	13	60	
48	16968	64QAM	5	13	60	
49	16968	64QAM	5	13	60	
50	16968	64QAM	5	13	60	
51	18232	64QAM	5	14	61	
52	18232	64QAM	5	14	61	
53	18232	64QAM	5	14	61	
54	18232	64QAM	5	14	61	
55	19600	64QAM	5	15	62	
56	19600	64QAM	5	15	62	
57	19600	64QAM	5	15	62	
58	19600	64QAM	5	15	62	
59	21072	64QAM	5	16	63	
60	21072	64QAM	5	16	63	
61	21072	64QAM	5	16	63	
62	21072	64QAM	5	16	63	

18.1.1.6a.6 TFRC test points for MAC-ehs with fixed MAC-d PDU size=656

Table 18.1.1.6a.6.1: TFRC test points for UE category 1 to UE category 3 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	696	QPSK	1	9	28	
2	1360	QPSK	1	16	45	
3	2024	QPSK	2	12	55	
4	2672	QPSK	2	16	62	

Table 18.1.1.6a.6.2: TFRC test points for UE category 4 to UE category 6 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	696	QPSK	1	9	22	
1	696	16QAM	1	5	22	
2	1344	QPSK	1	16	35	
2	1344	16QAM	1	8	35	
3	2024	QPSK	2	12	43	
3	2024	16QAM	1	12	43	
4	2744	QPSK	2	16	49	
4	2744	16QAM	1	16	49	
5	3368	16QAM	2	10	53	
6	4128	16QAM	2	12	57	
7	4808	16QAM	2	14	60	
8	5320	16QAM	2	16	62	

Table 18.1.1.6a.6.3: TFRC test points for UE category 7 to UE category 9 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	712	QPSK	1	9	20	
1	712	16QAM	1	5	20	
2	1336	QPSK	1	16	31	
2	1336	16QAM	1	8	31	
3	2000	QPSK	2	12	38	
3	2000	16QAM	1	12	38	
4	2664	QPSK	2	16	43	
4	2664	16QAM	1	16	43	
5	3360	QPSK	3	13	47	
5	3360	16QAM	2	10	47	
6	3984	QPSK	3	16	50	
6	3984	16QAM	2	12	50	
7	4736	16QAM	2	14	53	
8	5312	16QAM	2	16	55	
9	5960	16QAM	3	12	57	
10	6688	16QAM	3	13	59	
11	7496	16QAM	3	15	61	
12	7944	16QAM	3	16	62	

Table 18.1.1.6a.6.4: TFRC test points for UE category 10 to UE category 12 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	688	QPSK	1	9	18	
1	688	16QAM	1	5	18	
2	1360	QPSK	1	16	29	
2	1360	16QAM	1	8	29	
3	2096	QPSK	2	13	36	
3	2096	16QAM	1	13	36	
4	2688	QPSK	2	16	40	
4	2688	16QAM	1	16	40	
5	3448	QPSK	3	14	44	
5	3448	16QAM	2	10	44	
6	4160	QPSK	3	16	47	
6	4160	16QAM	2	12	47	
7	4704	QPSK	4	14	49	
7	4704	16QAM	2	14	49	
8	5328	QPSK	4	16	51	
8	5328	16QAM	2	16	51	
9	6032	16QAM	3	12	53	
10	6832	16QAM	3	13	55	
11	7264	16QAM	3	14	56	
12	8224	16QAM	3	16	58	
13	8752	16QAM	4	13	59	
14	9312	16QAM	4	14	60	
15	9912	16QAM	4	15	61	
16	10544	16QAM	4	16	62	
17	11224	16QAM	4	16	63	

Table 18.1.1.6a.6.5: TFRC test points for UE category 13 to UE category 15 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	680	QPSK	1	9	17	
1	680	16QAM	1	5	17	
2	1408	QPSK	2	9	28	
2	1408	16QAM	1	9	28	
3	2088	QPSK	2	13	34	
3	2088	16QAM	1	13	34	
4	2720	QPSK	2	16	38	
4	2720	16QAM	1	16	38	
5	3312	QPSK	3	13	41	
5	3312	16QAM	2	10	41	
6	4032	QPSK	3	16	44	
6	4032	16QAM	2	12	44	
7	4912	QPSK	4	15	47	
7	4912	16QAM	2	15	47	
8	5600	QPSK	4	16	49	
8	5600	16QAM	2	16	49	
9	5976	QPSK	5	14	50	
9	5976	16QAM	3	12	50	
10	6816	QPSK	5	16	52	
10	6816	16QAM	3	13	52	
11	7280	16QAM	3	14	53	
12	8304	16QAM	3	16	55	
13	8864	16QAM	4	13	56	
14	9464	16QAM	4	14	57	
15	10112	16QAM	4	15	58	
16	10792	16QAM	4	16	59	
17	11528	16QAM	5	14	60	
18	12312	16QAM	5	15	61	
19	13144	16QAM	5	15	62	
20	13144	16QAM	5	15	62	
21	14040	16QAM	5	16	63	

Table 18.1.1.6a.6.6: TFRC test points for UE category 16 to UE category 18 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	704	QPSK	1	9	18	
1	704	16QAM	1	5	18	
1	704	64QAM	1	3	18	
2	1344	QPSK	1	16	28	
2	1344	16QAM	1	8	28	
2	1344	64QAM	1	6	28	
3	2104	QPSK	2	13	35	
3	2104	16QAM	1	13	35	
3	2104	64QAM	1	9	35	
4	2720	QPSK	2	16	39	
4	2720	16QAM	1	16	39	
4	2720	64QAM	1	11	39	
5	3512	QPSK	3	14	43	
5	3512	16QAM	2	11	43	
5	3512	64QAM	1	14	43	
6	3992	QPSK	3	16	45	
6	3992	16QAM	2	12	45	
6	3992	64QAM	1	16	45	
7	4840	16QAM	2	14	48	
7	4840	64QAM	2	10	48	
8	5496	16QAM	2	16	50	
8	5496	64QAM	2	11	50	
9	6248	16QAM	3	12	52	
9	6248	64QAM	2	12	52	
10	6664	16QAM	3	13	53	
10	6664	64QAM	2	13	53	
11	7568	16QAM	3	15	55	
11	7568	64QAM	2	15	55	
12	8072	16QAM	3	16	56	
12	8072	64QAM	2	16	56	
13	8600	64QAM	3	11	57	
14	9776	64QAM	3	13	59	
15	10424	64QAM	3	14	60	
16	11112	64QAM	3	15	61	
17	11848	64QAM	3	16	62	
18	11848	64QAM	3	16	62	
19	12632	64QAM	3	16	63	

Table 18.1.1.6a.6.7: TFRC test points for UE category 19 to UE category 21 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	712	QPSK	1	9	17	
1	712	16QAM	1	5	17	
1	712	64QAM	1	3	17	
2	1424	QPSK	2	9	27	
2	1424	16QAM	1	9	27	
2	1424	64QAM	1	6	27	
3	2008	QPSK	2	12	32	
3	2008	16QAM	1	12	32	
3	2008	64QAM	1	8	32	
4	2832	QPSK	3	11	37	
4	2832	16QAM	2	9	37	
4	2832	64QAM	1	11	37	
5	3480	QPSK	3	14	40	
5	3480	16QAM	2	10	40	
5	3480	64QAM	1	14	40	
6	3992	QPSK	3	16	42	
6	3992	16QAM	2	12	42	
6	3992	64QAM	1	16	42	
7	4904	QPSK	4	15	45	
7	4904	16QAM	2	15	45	
7	4904	64QAM	2	10	45	
8	5624	16QAM	3	11	47	
8	5624	64QAM	2	11	47	
9	6024	16QAM	3	12	48	
9	6024	64QAM	2	12	48	
10	6904	16QAM	3	14	50	
10	6904	64QAM	2	14	50	
11	7400	16QAM	3	15	51	
11	7400	64QAM	2	15	51	
12	7920	16QAM	3	16	52	
12	7920	64QAM	2	16	52	
13	9088	16QAM	4	13	54	
13	9088	64QAM	3	12	54	
14	9736	16QAM	4	14	55	
14	9776	64QAM	3	13	55	
15	10424	16QAM	4	15	56	
15	10424	64QAM	3	14	56	
16	11168	16QAM	4	16	57	
16	11168	64QAM	3	15	57	
17	11960	64QAM	3	16	58	
18	11960	64QAM	3	16	58	
19	12808	64QAM	4	13	59	
20	13720	64QAM	4	14	60	
21	14688	64QAM	4	14	61	
22	14688	64QAM	4	14	61	
23	15736	64QAM	4	15	62	
24	16856	64QAM	4	16	63	
25	16856	64QAM	4	16	63	

Table 18.1.1.6a.6.8: TFRC test points for UE category 22 to UE category 24 for MAC-d PDU size=656

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
1	704	QPSK	1	9	16	
1	704	16QAM	1	5	16	
1	704	64QAM	1	3	16	
2	1352	QPSK	1	16	25	
2	1352	16QAM	1	8	25	
2	1352	64QAM	1	6	25	
3	2088	QPSK	2	13	31	
3	2088	16QAM	1	13	31	
3	2088	64QAM	1	9	31	
4	2792	QPSK	3	11	35	
4	2792	16QAM	2	9	35	
4	2792	64QAM	1	11	35	
5	3464	QPSK	3	14	38	
5	3464	16QAM	2	10	38	
5	3464	64QAM	1	14	38	
6	4000	QPSK	3	16	40	
6	4000	16QAM	2	12	40	
6	4000	64QAM	1	16	40	
7	4624	QPSK	4	14	42	
7	4624	16QAM	2	14	42	
7	4624	64QAM	2	9	42	
8	5344	QPSK	4	16	44	
8	5344	16QAM	2	16	44	
8	5344	64QAM	2	11	44	
9	6176	QPSK	5	15	46	
9	6176	16QAM	3	12	46	
9	6176	64QAM	2	12	46	
10	6632	QPSK	5	16	47	
10	6632	16QAM	3	13	47	
10	6632	64QAM	2	13	47	
11	7664	16QAM	3	15	49	
11	7664	64QAM	2	15	49	
12	8240	16QAM	3	16	50	
12	8240	64QAM	2	16	50	
13	8856	16QAM	4	13	51	
13	8856	64QAM	3	12	51	
14	9520	16QAM	4	14	52	
14	9520	64QAM	3	13	52	
15	10232	16QAM	4	15	53	
15	10232	64QAM	3	13	53	
16	11000	16QAM	4	16	54	
16	11000	64QAM	3	14	54	
17	11824	16QAM	5	14	55	
17	11824	64QAM	3	15	55	
18	12712	16QAM	5	15	56	
18	12712	64QAM	4	13	56	
19	12712	16QAM	5	15	56	
19	12712	64QAM	4	13	56	

Number of MAC-d PDUs	Selected transport block size [bits]	Modulation scheme	Number of timeslots	Number of codes per timeslot	TFRI	Comments
20	13664	16QAM	5	16	57	
20	13664	64QAM	4	13	57	
21	14688	64QAM	4	14	58	
22	14688	64QAM	4	14	58	
23	15784	64QAM	4	15	59	
24	15784	64QAM	4	15	59	
25	16968	64QAM	5	13	60	
26	18232	64QAM	5	14	61	
27	18232	64QAM	5	14	61	
28	19600	64QAM	5	15	62	
29	19600	64QAM	5	15	62	
30	21072	64QAM	5	16	63	
31	21072	64QAM	5	16	63	
32	21072	64QAM	5	16	63	

18.1.1.7 Generic test procedure for HS-DSCH radio bearer combinations with enhanced Layer 2

See 14.1.3.5a for test procedure

18.1.1.8 Generic test procedure for HS-DSCH and E-DCH radio bearer combinations with downlink and uplink enhanced Layer 2

See 14.1.4.1b for test procedure

18.1.1.9 Generic test procedure for HS-DSCH and E-DCH radio bearer combinations for enhanced uplink in CELL_FACH

See 14.1.4.3 for test procedure

18.1.2 Combinations on DPCH

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

Test to verify establishment and signalling of stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.1.

The test case is performed by running test case 9.4.1 (Location updating / accepted) using the stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.1.

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

Test to verify establishment and signalling of stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.2.

The test case is performed by running test case 9.4.1 (Location updating / accepted) using the stand-alone signalling reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.2.

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

Implicitly tested.

NOTE: The stand-alone UL:13.6 DL:13.6 kbps SRBs for DCCH in TS 34.108, clause 6.11.5.4.1.3 is the default signalling radio bearer used in the generic setup procedure as specified in TS 34.108 clause 7.

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

18.1.2.4.1 Conformance requirement

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

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

Reference(s)

3GPP TS 25.331, clause 8.2.1

3GPP TS 25.2xx series (Physical Layer)

3GPP TS 25.321 (MAC)

3GPP TS 25.322 (RLC)

18.1.2.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.4.

18.1.2.4.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.4.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.4a Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH(TDD)

18.1.2.4a.1 Definition and applicability

All UEs which support TDD.

18.1.2.4a.2 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)

18.1.2.4a.3 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.4.

18.1.2.4a.4 Method of test

Initial Condition

System Simulator: 2 cells - Cell 1 and 2 are active. Each cell configure 3 carriers, one is the primary carrier, the other two are secondary carrier.

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.4a.5 Test requirements

See 18.1.1.1 for definition of step 10 and step 15. (establish the connection on the secondary carrier)

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

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

18.1.2.5.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.5.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.5.

18.1.2.5.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 99 bits RB7: 40 bits	RB5: 39 bits RB6: No data RB7: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 65 bits RB6: 99 bits RB7: 40 bits	RB5: 65 bits RB6: 99 bits RB7: 40 bits

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

See clause 18.1.1.1 for test procedure.

18.1.2.5.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x39).
 - for sub-test 2: RB5/TF2 (1x65); RB6/TF1 (1x99); and RB7/TF1 (1x40).

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 or RB7.
- for sub-test 2: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by SS.

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

18.1.2.6.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.6.

18.1.2.6.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See clause 18.1.1.1 for test procedure.

18.1.2.6.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.7.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.7.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.7.

18.1.2.7.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 87 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 61 bits RB6: 87 bits	RB5: 61 bits RB6: 87 bits

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

See clause 18.1.1.1 for test procedure.

18.1.2.7.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
- for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

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

18.1.2.8.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.8.

18.1.2.8.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See clause 18.1.1.1 for test procedure.

18.1.2.8.4 Test requirements

See clause 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.9.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.9.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.9.

18.1.2.9.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 63 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 55 bits RB6: 63 bits	RB5: 55 bits RB6: 63 bits

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

See clause 18.1.1.1.1 for test procedure.

18.1.2.9.4 Test requirements

See 18.1.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x39).
 - for sub-test 2: RB5/TF2 (1x55) and RB6/TF1 (1x63).

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
- for sub-test 2: an RLC SDU on each of RB5 and RB6 having the same content as sent by SS

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

18.1.2.10.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.10.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.10.

18.1.2.10.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See clause 18.1.1.1 for test procedure.

18.1.2.10.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.11.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.11.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.11.

18.1.2.11.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 39 bits RB6: 53 bits	RB5: 39 bits RB6: No data
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 42 bits RB6: 53 bits	RB5: 42 bits RB6: 53 bits

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

See clause 18.1.1.1 for test procedure.

18.1.2.11.4 Test requirements

See clause 18.1.1.1 for definition of step 10 and step 15.

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

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

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

18.1.2.12.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.12.

18.1.2.12.3 Method of test

Initial Conditions

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

Uplink RLC TM RLC Transmission RLC discard CHOICE <i>SDU Discard Mode</i> Timer based no explicit Timer_discard Segmentation indication	100ms FALSE
Downlink RLC TM RLC Segmentation indication	FALSE
NOTE: 'Timer based discard without explicit signalling' is configured in uplink to secure that the UE will be able to return data in uplink for the case when the UE test loop function, due to processing delays, will not deliver the SDUs in one and the same TTI, but instead in two subsequent TTIs.	

Uplink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Uplink TFCS:

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

Downlink TFS:

		RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 576	RB5: 2x576
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See clause 18.1.1.1 for test procedure.

18.1.2.12.4 Test requirements

See clause 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.13.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI

18.1.2.13.1.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.13.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.13 for the 20 ms TTI case.

18.1.2.13.1.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See clause 18.1.1.1 for test procedure.

18.1.2.13.1.4 Test requirements

See clause 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.13.1a Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI(TDD)

18.1.2.13.1a.1 Definition and applicability

All UEs which support TDD.

18.1.2.13.1a.2 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.13.1a.3 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.13 for the 20 ms TTI case.

18.1.2.13.1a.4 Method of test

Initial Conditions

System Simulator: 2 cells - Cell 1 and 2 are active. Each cell configure 3 carriers, one is the primary carrier, the other two are secondary carrier.

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See clause 18.1.1.1 for test procedure.

18.1.2.13.1a.5 Test requirements

See clause 18.1.1.1 for definition of step 10 and step 15 (establish the connection on the secondary carrier).

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

18.1.2.13.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI

18.1.2.13.2.1 Conformance requirement

See clause 18.1.2.4.1.

18.1.2.13.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.13 for the 40 ms TTI case.

18.1.2.13.2.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.13.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.14.1 Conversational / unknown / UL:32 DL:32 kbps / CS RAB / 20 ms TTI

18.1.2.14.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.14.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.14 for the 20 ms TTI case.

18.1.2.14.1.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.14.1.4 Test requirements

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

18.1.2.14.2 Conversational / unknown / UL:32 DL:32 kbps / CS RAB / 40 ms TTI

18.1.2.14.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.14.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.14 for the 40 ms TTI case.

18.1.2.14.2.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.14.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.15.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.15.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.15.

18.1.2.15.3 Method of test

Uplink TFS:

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

Uplink TFCs:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.15.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.16.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.16.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.16.

18.1.2.16.3 Method of test

Initial Conditions

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

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

Uplink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Uplink TFCS:

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

Downlink TFS:

	TFI	RB5 (28.8 kbps)	DCCH
TFS	TF0, bits	0x576	0x148
	TF1, bits	1x576	1x148
	TF2, bits	2x576	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5,	RB5: 576	RB5: 2x576
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.16.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.17.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.17.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.17.

18.1.2.17.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5,	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 576	RB5: 576
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 576	RB5: 2x576
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 576	RB5: 3x576
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 576	RB5: 4x576

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

See 18.1.1.1 for test procedure.

18.1.2.17.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.18 Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.18.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.18.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.18.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.1 (Streaming/unknown/UL:14.4 kbps) is used in uplink.

18.1.2.18.3 Method of test

Initial Conditions

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

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

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x320	0x148
	TF1, bits	1x320	1x148
	TF2, bits	2x320	N/A
	TF3, bits	4x320	N/A
	TF4, bits	8x320	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 320
2	DL_TFC2	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 2x320
3	DL_TFC3	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 4x320
4	DL_TFC4	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 576	RB5: 8x320

NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.

See 18.1.1.1 for test procedure.

18.1.2.18.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 where the first 320 bits have the same content as the RLC SDU sent by the SS.
 - for sub-test 2 to 4: one or more RLC SDUs on RB5 where the first 320 bits have the same content as the RLC SDU sent by the SS.

18.1.2.19 Streaming / unknown / UL:64 DL:0 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.19.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.19.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.19.

To be able to test the uplink radio bearer using the UE loopback function for the reference radio bearer UL:64 DL: 0 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.2 (Streaming/unknown/DL:14.4 kbps) is used in downlink.

18.1.2.19.3 Method of test

Initial Conditions

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

Uplink RLC TM RLC Segmentation indication	TRUE
Downlink RLC TM RLC Segmentation indication	TRUE

Uplink TFS:

	TFI	RB5 (64 kbps)	DCCH
TFS	TF0, bits	0x320	0x148
	TF1, bits	1x320	1x148
	TF2, bits	2x320	N/A
	TF3, bits	4x320	N/A
	TF4, bits	8x320	N/A

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 320	RB5: 576 (note 2)
2	DL_TFC1	UL_TFC2	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 640	RB5: 576 (note 3)
3	DL_TFC1	UL_TFC3	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1280	RB5: 576 (note 4)
4	DL_TFC1	UL_TFC4	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2560	RB5: 576 (note 5)
<p>NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.</p> <p>NOTE 2: SS is using a DL RLC SDU with 576 bits as test data (=DL RLC PDU size for DL/TF1). UE will return the first 320 bits of the test data.</p> <p>NOTE 3: SS is using a DL RLC SDU size of 576 bits as test data (=DL RLC PDU size for DL/TF1). UE will return an RLC SDU repeating the received DL RLC SDU two times (truncating the last one to fit the UL RLC SDU size of 640 bits).</p> <p>NOTE 4: SS is using a DL RLC SDU size of 576 bits as test data (=DL RLC PDU size for DL/TF1). UE will return an RLC SDU repeating the received DL RLC SDU three times (truncating the last one to fit the UL RLC SDU size of 1280 bits).</p> <p>NOTE 5: SS is using a DL RLC SDU size of 576 bits as test data (=DL RLC PDU size for DL/TF1). UE will return an RLC SDU repeating the received DL RLC SDU five times (truncating the last one to fit the UL RLC SDU size of 2560 bits).</p>						

See 18.1.1.1 for test procedure.

18.1.2.19.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x320).
 - for sub-test 2: RB5/TF2 (2x320).
 - for sub-test 3: RB5/TF3 (4x320).
 - for sub-test 4: RB5/TF4 (8x320).
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as the first 320 bits of the DL RLC SDU sent by the SS.
 - for sub-test 2: an RLC SDU on RB5 for which the first 576 bits are equal to the sent DL RLC SDU bit pattern and the remaining 64 bits are equal to the first 64 bits of the sent DL RLC SDU.
 - for sub-test 3: an RLC SDU on RB5 for which the first 1152 bits are equal to the sent DL RLC SDU bit pattern repeated twice and the remaining 128 bits are equal to the first 128 bits of the sent DL RLC SDU.
 - for sub-test 4: an RLC SDU on RB5 for which the first 2304 bits are equal to the sent DL RLC SDU bit pattern repeated four times and the remaining 256 bits are equal to the first 256 of the sent DL RLC SDU.

- 18.1.2.20 Void
- 18.1.2.21 Void
- 18.1.2.22 Void
- 18.1.2.23 Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH
- 18.1.2.23.1 Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC,10 ms TTI)
- 18.1.2.23.1.1 Conformance requirement
- See 18.1.2.4.1.
- 18.1.2.23.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23 for the turbo channel coding and uplink 10 ms TTI case.

- 18.1.2.23.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC2	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 312	RB5: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.23.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.23.2 Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.23.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.23.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23 for the turbo channel coding and uplink 20 ms TTI case.

18.1.2.23.2.3 Method of test

Uplink TFS:

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

Uplink TFCs:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.23.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.23.3 Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23 for the convolutional channel coding and uplink 10 ms TTI case.

See test case 18.1.2.23.1 for test procedure and test requirement.

18.1.2.23.4 Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23 for the convolutional channel coding and uplink 20 ms TTI case.

See test case 18.1.2.23.2 for test procedure and test requirement.

18.1.2.24 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.24.1 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / TC

18.1.2.24.1.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.24.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.24 for the downlink turbo coding case.

18.1.2.24.1.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC1	UL_TFC2	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC1	UL_TFC3	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC1	UL_TFC4	DL_TFC0, DL_TFC2, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.24.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.24.2 Interactive or background / UL:64 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH / CC

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.24 for the downlink convolutional channel coding case.

See test case 18.1.2.24.1 for test procedure and test requirement.

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

18.1.2.25.1 Interactive or background / UL:32 DL: 64 kbps / PS RAB / (TC, 10 ms TTI)

18.1.2.25.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.25.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.25 for the uplink turbo channel coding and 10 ms TTI case.

18.1.2.25.1.3 Method of test

Uplink TFS:

	TFI	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.25.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.25.2 Interactive or background / UL:32 DL: 64 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.25.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.25.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.25 for the uplink turbo channel coding and 20 ms TTI case.

18.1.2.25.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.25.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.25.3 Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.25 for the uplink convolutional channel coding and 10 ms TTI case.

See test case 18.1.2.25.1 for test procedure and test requirement.

18.1.2.25.4 Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.25 for the uplink convolutional channel coding and 20 ms TTI case.

See test case 18.1.2.25.2 for test procedure and test requirement.

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

18.1.2.26.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.26.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.26.

18.1.2.26.3 Method of 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)

Downlink 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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.</p>						

See 18.1.1.1 for test procedure.

18.1.2.26.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.27.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.27.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.27.

18.1.2.27.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.27.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (3x336).
 - for sub-test 4: RB5/TF4 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
 - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

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

18.1.2.28.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.28.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.28.

18.1.2.28.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.28.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.29.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.29.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.29.

18.1.2.29.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2872
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size parameter has been set to achieve verification of all test data sent by SS in downlink, i.e. UL RLC SDU size is set to nearest multiple of the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit) which is equal or bigger than the test data size.</p>						

See 18.1.1.1 for test procedure.

18.1.2.29.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4: RB5/TF4 (8x336).
 - for sub-test 5: RB5/TF3 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
 - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

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

18.1.2.30.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.30.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.30.

18.1.2.30.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.30.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4: RB5/TF4 (8x336).
 - for sub-test 5: RB5/TF5 (9x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

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

18.1.2.31.1 Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL: 3.4 kbps SRBs for DCCH/ 10 ms TTI

18.1.2.31.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.31.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.31 for the downlink 10 ms TTI case.

18.1.2.31.1.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.31.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (3x336).
 - for sub-test 4: RB5/TF4 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1, 2 and 4: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
 - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

18.1.2.31.2 Interactive or background / UL:64 DL:256 kbps / PS RAB / 20 ms TTI

18.1.2.31.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.31.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.31 for the downlink 20 ms TTI case.

18.1.2.31.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC5		UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112

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

See 18.1.1.1 for test procedure.

18.1.2.31.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (3x336).
 - for sub-test 4 to 6: RB5/TF4 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 6: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

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

18.1.2.32.1 Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.32.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.32.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.32 for the 10 ms TTI case.

18.1.2.32.1.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.32.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (3x336).
 - for sub-test 4 and 5: RB5/TF4 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1, 2, 4 and 5: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.
 - for sub-test 3: an RLC SDU on RB5 having the first 1272 bits equal to the content of the test data sent by the SS in downlink.

18.1.2.32.2 Interactive or background / UL:64 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.32.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.32.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.32 for the 20 ms TTI case.

18.1.2.32.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1912	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 3832	RB5: 3832
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 6392	RB5: 6392
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC9, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672

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

See 18.1.1.1 for test procedure.

18.1.2.32.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.33.1 Interactive or background / UL:128 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.33.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.33.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.33 for the 10 ms TTI case.

18.1.2.33.1.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC3	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 3832	RB5: 3832
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.33.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.33.2 Interactive or background / UL:128 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.33.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.33.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.33 for the 20 ms TTI case.

18.1.2.33.2.3 Method of test

Uplink TFS:

	TF	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)

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.33.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.34.1 Interactive or background / UL:384 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.34.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.34.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.34 for the 10 ms TTI case.

18.1.2.34.1.3 Method of test

Uplink TFS:

	TF	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)

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7		UL_TFC0, UL_TFC1, UL_TFC7, UL_TFC8	RB5: 312	RB5: 312
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7		UL_TFC0, UL_TFC2, UL_TFC7, UL_TFC9	RB5: 632	RB5: 632
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7		UL_TFC0, UL_TFC3, UL_TFC7, UL_TFC10	RB5: 1272	RB5: 1272
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7		UL_TFC0, UL_TFC4, UL_TFC7, UL_TFC11	RB5: 2552	RB5: 2552
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC7, UL_TFC0, UL_TFC7		UL_TFC0, UL_TFC5, UL_TFC7, UL_TFC12	RB5: 3832	RB5: 3832

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

See 18.1.1.1 for test procedure.

18.1.2.34.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

- for sub-test 2: RB5/TF2 (2x336).
- for sub-test 3: RB5/TF3 (4x336).
- for sub-test 4: RB5/TF4 (8x336).
- for sub-test 5: RB5/TF4 (12x336).

3. At step 15 the UE shall return

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

18.1.2.34.2 Interactive or background / UL:384 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.34.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.34.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.34. for the 20 ms TTI case

18.1.2.34.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.34.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4: RB5/TF4 (8x336).
 - for sub-test 5: RB5/TF5 (12x336).
 - for sub-test 6: RB5/TF6 (16x336).
 - for sub-test 7: RB5/TF7 (20x336).
 - for sub-test 8: RB5/TF8 (24x336).

3. At step 15 the UE shall return

- for sub-test 1 to 8: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

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

18.1.2.35.1 Interactive or background / UL:64 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.35.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.35.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.35 for the 10 ms TTI case.

18.1.2.35.1.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

	TFI	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.35.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

- for sub-test 4 to 10: RB5/TF4 (4x336).

3. At step 15 the UE shall return

- for sub-test 1 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.35.2 Interactive or background / UL:64 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.35.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.35.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.35 for the 20 ms TTI case.

18.1.2.35.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)

TFCI	(RB5, DCCH)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2872	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 28152	RB5: 28152

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
14	DL_TFC14	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.35.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (3x336).
 - for sub-test 4 to 18: RB5/TF4 (4x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.36 Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.36.1 Interactive or background / UL:128 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.36.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.36.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.36 for the 10 ms TTI case.

18.1.2.36.1.3 Method of test

Uplink TFS:

	TF	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)

Downlink TFS:

	TF	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

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

TFCI	(RB5, DCCH)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Sub-tests:

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

See 18.1.1.1 for test procedure.

18.1.2.36.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.36.2 Interactive or background / UL:128 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.36.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.36.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.36 for the 20 ms TTI case.

18.1.2.36.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)

TFCI	(RB5, DCCH)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 23032	RB5: 23032
12	DL_TFC12	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 28152	RB5: 28152

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
14	DL_TFC14	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.36.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4 to 18: RB5/TF4 (8x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.37 Interactive or background / UL:384 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.37.1 Interactive or background / UL:384 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.37.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.37.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.37 for the 10 ms TTI case.

18.1.2.37.1.3 Method of test

Uplink TFS:

	TF	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)

Downlink TFS:

	TF	RB5 (2048 kbps, 10ms)	DCCH
TFS	TF0, bits	0x656	0x148
	TF1, bits	1x656	1x148
	TF2, bits	2x656	N/A
	TF3, bits	4x656	N/A
	TF4, bits	8x656	N/A
	TF5, bits	12x656	N/A
	TF6, bits	16x656	N/A
	TF7, bits	20x656	N/A
	TF8, bits	24x656	N/A
	TF9, bits	28x656	N/A
	TF10, bits	32x656	N/A

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF0, TF1)
DL_TFC12	(TF1, TF1)

TFCI	(RB5, DCCH)
DL_TFC13	(TF2, TF1)
DL_TFC14	(TF3, TF1)
DL_TFC15	(TF4, TF1)
DL_TFC16	(TF5, TF1)
DL_TFC17	(TF6, TF1)
DL_TFC18	(TF7, TF1)
DL_TFC19	(TF8, TF1)
DL_TFC20	(TF9, TF1)
DL_TFC21	(TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC5	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC3	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC4	DL_TFC0, DL_TFC11, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 20472	RB5: 20472
<p>NOTE: 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.</p>						

See 18.1.1.1 for test procedure.

18.1.2.37.1.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4: RB5/TF3 (8x336).
 - for sub-test 5 to 10: RB5/TF4 (12x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 10: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.37.2 Interactive or background / UL:384 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.37.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.37.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.37 for the 20 ms TTI case.

18.1.2.37.2.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

TFCI	(RB5, DCCH)
UL_TFC14	(TF5, TF1)
UL_TFC15	(TF6, TF1)
UL_TFC16	(TF7, TF1)
UL_TFC17	(TF8, TF1)

Downlink TFS:

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

Downlink TFCS:

TFCI	(RB5, DCCH)
DL_TFC0	(TF0, TF0)
DL_TFC1	(TF1, TF0)
DL_TFC2	(TF2, TF0)
DL_TFC3	(TF3, TF0)
DL_TFC4	(TF4, TF0)
DL_TFC5	(TF5, TF0)
DL_TFC6	(TF6, TF0)
DL_TFC7	(TF7, TF0)
DL_TFC8	(TF8, TF0)
DL_TFC9	(TF9, TF0)
DL_TFC10	(TF10, TF0)
DL_TFC11	(TF11, TF0)
DL_TFC12	(TF12, TF0)
DL_TFC13	(TF13, TF0)
DL_TFC14	(TF14, TF0)
DL_TFC15	(TF15, TF0)
DL_TFC16	(TF16, TF0)
DL_TFC17	(TF17, TF0)
DL_TFC18	(TF18, TF0)
DL_TFC19	(TF0, TF1)
DL_TFC20	(TF1, TF1)
DL_TFC21	(TF2, TF1)
DL_TFC22	(TF3, TF1)
DL_TFC23	(TF4, TF1)
DL_TFC24	(TF5, TF1)
DL_TFC25	(TF6, TF1)
DL_TFC26	(TF7, TF1)
DL_TFC27	(TF8, TF1)

TFCI	(RB5, DCCH)
DL_TFC28	(TF9, TF1)
DL_TFC29	(TF10, TF1)
DL_TFC30	(TF11, TF1)
DL_TFC31	(TF12, TF1)
DL_TFC32	(TF13, TF1)
DL_TFC33	(TF14, TF1)
DL_TFC34	(TF15, TF1)
DL_TFC35	(TF16, TF1)
DL_TFC36	(TF17, TF1)
DL_TFC37	(TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 632	RB5: 632
2	DL_TFC2	UL_TFC2	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 1272	RB5: 1272
3	DL_TFC3	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 2552	RB5: 2552
4	DL_TFC4	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 5112	RB5: 5112
5	DL_TFC5	UL_TFC5	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC5, UL_TFC9, UL_TFC14	RB5: 7672	RB5: 7672
6	DL_TFC6	UL_TFC6	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 10232	RB5: 10232
7	DL_TFC7	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 12792	RB5: 12792
8	DL_TFC8	UL_TFC8	DL_TFC0, DL_TFC19, , UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 15352	RB5: 15352
9	DL_TFC9	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 17912	RB5: 17912
10	DL_TFC10	UL_TFC6	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 20472	RB5: 20472
11	DL_TFC11	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 23032	RB5: 23032

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
12	DL_TFC12	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 25592	RB5: 25592
13	DL_TFC13	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 28152	RB5: 28152
14	DL_TFC14	UL_TFC8	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 30712	RB5: 30712
15	DL_TFC15	UL_TFC3	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 33272	RB5: 33272
16	DL_TFC16	UL_TFC4	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 35832	RB5: 35832
17	DL_TFC17	UL_TFC7	DL_TFC0, DL_TFC19, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC7, UL_TFC9, UL_TFC16	RB5: 38392	RB5: 38392
18	DL_TFC18	UL_TFC6	DL_TFC0, DL_TFC19, , UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 40952	RB5: 40952
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. The UL RLC SDU size have been chosen such that the UE will return all data received in downlink and that the UL RLC SDU will fill up the uplink transport format set under test over one or several transmission time intervals.						

See 18.1.1.1 for test procedure.

18.1.2.37.2.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RB5/TF1 (1x336).
 - for sub-test 2: RB5/TF2 (2x336).
 - for sub-test 3: RB5/TF3 (4x336).
 - for sub-test 4: RB5/TF4 (8x336).
 - for sub-test 5: RB5/TF5 (12x336).
 - for sub-test 6: RB5/TF6 (16x336).
 - for sub-test 7: RB5/TF7 (20x336).
 - for sub-test 8 to 18: RB5/TF4 (24x336).
3. At step 15 the UE shall return
 - for sub-test 1 to 18: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the SS.

18.1.2.38 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.38.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.38.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.38.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the turbo channel coding and 20 ms TTI case.

18.1.2.38.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	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

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, TF0, TF1)
UL_TFC10	(TF1, TF0, TF0, TF0, TF1)
UL_TFC11	(TF2, TF1, TF1, TF0, TF1)
UL_TFC12	(TF0, TF0, TF0, TF1, TF1)
UL_TFC13	(TF1, TF0, TF0, TF1, TF1)
UL_TFC14	(TF2, TF1, TF1, TF1, TF1)
UL_TFC15	(TF0, TF0, TF0, TF2, TF1)
UL_TFC16	(TF1, TF0, TF0, TF2, TF1)
UL_TFC17	(TF2, TF1, TF1, TF2, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC7	UL_TFC1 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC12	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC13	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC14	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC3 DL_TFC9	UL_TFC6 UL_TFC15	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 312
7	DL_TFC4 DL_TFC10	UL_TFC7 UL_TFC16	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 312
8	DL_TFC5 DL_TFC11	UL_TFC8 UL_TFC17	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 312
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 40 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).						

18.1.2.38.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub test.

3. At step 15 the UE shall return

- for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
- for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
- for sub-test 3 and 6: an RLC SDU on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 4 and 7: an RLC SDU on RB5 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB6 and RB7.
- for sub-test 5 and 8: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.38.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (TC, 10 ms TTI)

18.1.2.38.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.38.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the turbo channel coding and 10 ms TTI case.

18.1.2.38.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS under test	Uplink TFCS Under test	Implicitly Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC7	UL_TFC1 UL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 312

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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 40 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over four subsequent TTIs, i.e. UL RLC SDU SIZE has been set to four times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).

18.1.2.38.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB5 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS and on RB8 having the first 312 bits equal to the content sent by the SS in the downlink.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.38.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the convolutional channel coding and 20 ms TTI case.

See test case 18.1.2.38.1 for test procedure and test requirement.

18.1.2.38.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:8 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38 for the convolutional channel coding and 10 ms TTI case.

See test case 18.1.2.38.2 for test procedure and test requirement.

18.1.2.39 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.39.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (TC, 10 ms TTI)

18.1.2.39.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.39.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink turbo channel coding and 10 ms TTI case.

18.1.2.39.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 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	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 20 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.39.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

- for sub-test 6: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 7: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 9: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 10: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 13: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 14: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.39.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (TC, 20 ms TTI)

18.1.2.39.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.39.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink turbo channel coding and 20 ms TTI case.

18.1.2.39.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 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

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, TF0, TF1)
UL_TFC10	(TF1, TF0, TF0, TF0, TF1)
UL_TFC11	(TF2, TF1, TF1, TF0, TF1)
UL_TFC12	(TF0, TF0, TF0, TF1, TF1)
UL_TFC13	(TF1, TF0, TF0, TF1, TF1)
UL_TFC14	(TF2, TF1, TF1, TF1, TF1)
UL_TFC15	(TF0, TF0, TF0, TF2, TF1)
UL_TFC16	(TF1, TF0, TF0, TF2, TF1)
UL_TFC17	(TF2, TF1, TF1, TF2, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC12	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC3, UL_TFC9, UL_TFC12	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC13	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC14	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC6, UL_TFC15	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC6, UL_TFC9, UL_TFC15	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC7, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC8, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.39.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 6: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 7: an RLC SDU on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
- for sub-test 9: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 10: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 11: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 12: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 13: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 14: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.39.3 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 10 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink convolutional channel coding and 10 ms TTI case.

See test case 18.1.2.39.1 for test procedure and test requirement.

18.1.2.39.4 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:64 kbps / PS RAB / (CC, 20 ms TTI)

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.39 for the uplink convolutional channel coding and 20 ms TTI case.

See test case 18.1.2.39.2 for test procedure and test requirement.

18.1.2.40 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.40.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.40.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.40.

18.1.2.40.3 Method of test

See 18.1.1.2 for test procedure.

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)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, DUL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.40.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3, 6, 9 and 12: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4, 7, 10 and 13: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5, 8, 11 and 14: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.41 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.41.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.41.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.41.

18.1.2.41.3 Method of test

See 18.1.1.2 for test procedure.

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)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, , UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
<p>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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

18.1.2.41.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 6: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 7: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 8: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 9: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: RLC SDUs on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 12: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 13: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 14: RLC SDUs on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.42 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.42.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB / 10 ms TTI

18.1.2.42.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.42.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.42 for the downlink 10 ms TTI case.

18.1.2.42.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	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)	RB8 (256 kbps)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, DL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, DL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, DL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, DL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, DL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, DL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, DL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, DL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	UL_TFC9, DL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC25	UL_TFC10, DL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, DL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC27	UL_TFC12, DL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC28	UL_TFC13, DL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC29	UL_TFC14, DL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
<p>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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 10 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over each TTIs, i.e. UL RLC SDU SIZE has been set to the uplink TFS size under test minus 8 (the size of a 7 bit length indicator and expansion bit).</p>						

18.1.2.42.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

- for sub-test 6: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 7: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 13: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 14: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.42.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:256 kbps / PS RAB / 20 ms TTI

18.1.2.42.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.42.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.42 for the downlink 20 ms TTI case.

18.1.2.42.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	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)	RB8 (256 kbps, 20 ms)	DCCH
TFS	TF0, bits	1x0	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
	TF6, bits	N/A	N/A	N/A	16x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF0, TF1)
DL_TFC22	(TF1, TF0, TF0, TF0, TF1)
DL_TFC23	(TF2, TF1, TF1, TF0, TF1)
DL_TFC24	(TF0, TF0, TF0, TF1, TF1)
DL_TFC25	(TF1, TF0, TF0, TF1, TF1)
DL_TFC26	(TF2, TF1, TF1, TF1, TF1)
DL_TFC27	(TF0, TF0, TF0, TF2, TF1)
DL_TFC28	(TF1, TF0, TF0, TF2, TF1)
DL_TFC29	(TF2, TF1, TF1, TF2, TF1)
DL_TFC30	(TF0, TF0, TF0, TF3, TF1)
DL_TFC31	(TF1, TF0, TF0, TF3, TF1)
DL_TFC32	(TF2, TF1, TF1, TF3, TF1)
DL_TFC33	(TF0, TF0, TF0, TF4, TF1)
DL_TFC34	(TF1, TF0, TF0, TF4, TF1)
DL_TFC35	(TF2, TF1, TF1, TF4, TF1)
DL_TFC36	(TF0, TF0, TF0, TF5, TF1)
DL_TFC37	(TF1, TF0, TF0, TF5, TF1)
DL_TFC38	(TF2, TF1, TF1, TF5, TF1)
DL_TFC39	(TF0, TF0, TF0, TF6, TF1)
DL_TFC40	(TF1, TF0, TF0, TF6, TF1)
DL_TFC41	(TF2, TF1, TF1, TF6, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC22	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC23	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC24	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC25	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC26	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC27	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC28	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC29	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21 UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC30	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC31	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC32	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC33	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC34	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27 UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC35	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC36	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC37	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27 UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC38	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3832
18	DL_TFC18, DL_TFC39	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 5112
19	DL_TFC19, DL_TFC40	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC41	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC21, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
<p>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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

18.1.2.42.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 6: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 7: an RLC SDU on RB5 and RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 8: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
 - for sub-test 9: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: an RLC SDU on RB8 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 12: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 13: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 14: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 15: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 16: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 17: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 18: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 19: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 20: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.43 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.43.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB / 10 ms TTI

18.1.2.43.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.43.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.43 for the downlink 10 ms TTI case.

18.1.2.43.1.3 Method of test

See 18.1.1.2 for test procedure.

For the PS DL:384/UL:64 kbps radio bearer the downlink TTI is 10ms while the uplink TTI is 20ms. As the SS will send one DL SDU every 10 ms then the UE test loop function will return 2 UL SDUs per uplink TTI. To not cause uplink transmission buffer overflow then the UL RLC SDU size should be chosen such that the UE will transmit 2 RLC SDUs per uplink TTI. For the case when the transport format under test does not allow for 2 SDUs to fit into the transport format size without requiring concatenation then the UL RLC SDU size shall be chosen such that one SDU is returned per uplink TTI.

The following RLC parameter value is used in the RADIO BEARER SETUP message used to setup the PS DL:384/UL:64 kbps radio bearer:

Uplink RLC Transmission window size	512
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NOTE The transmission window size value have been chosen to avoid that UE transmission buffer becomes full during the 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)	RB8 (384 kbps, 10 ms)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF0, TF1)
DL_TFC19	(TF1, TF0, TF0, TF0, TF1)
DL_TFC20	(TF2, TF1, TF1, TF0, TF1)
DL_TFC21	(TF0, TF0, TF0, TF1, TF1)
DL_TFC22	(TF1, TF0, TF0, TF1, TF1)
DL_TFC23	(TF2, TF1, TF1, TF1, TF1)
DL_TFC24	(TF0, TF0, TF0, TF2, TF1)
DL_TFC25	(TF1, TF0, TF0, TF2, TF1)
DL_TFC26	(TF2, TF1, TF1, TF2, TF1)
DL_TFC27	(TF0, TF0, TF0, TF3, TF1)
DL_TFC28	(TF1, TF0, TF0, TF3, TF1)
DL_TFC29	(TF2, TF1, TF1, TF3, TF1)
DL_TFC30	(TF0, TF0, TF0, TF4, TF1)
DL_TFC31	(TF1, TF0, TF0, TF4, TF1)
DL_TFC32	(TF2, TF1, TF1, TF4, TF1)
DL_TFC33	(TF0, TF0, TF0, TF5, TF1)
DL_TFC34	(TF1, TF0, TF0, TF5, TF1)
DL_TFC35	(TF2, TF1, TF1, TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC19	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC20	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC21	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC22	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC23	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC5, UL_TFC17, UL_TFC18, UL_TFC15, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC24	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC25	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC26	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC27	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: No data RB6: No data RB7: No data RB8: 1272

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
10	DL_TFC10, DL_TFC28	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC29	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 (note 2)	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC30	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC31	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC32	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC33	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC34	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC35	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC18, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 81 RB6: 103 RB7: 60 RB8: 3832

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
<p>NOTE 1: 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).</p> <p>NOTE 2: RB8 (TF1/TF3): For sub-tests where uplink transport format TF1 (1x336) or TF3 (3x336) are used then no adaptation to the difference in downlink TTI (10 ms) and uplink TTI (20ms) is possible as this would require the UE to concatenate 2 SDUs into one PDU for TF1; or into three PDUs for TF3. For these sub-tests the UL RLC SDU size is set equal to the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).</p> <p>NOTE 3: RB8 (TF2/TF4): For sub-tests where uplink transport formats TF2 (2x336) or TF4 (4x336) is used then to adapt to the difference in downlink TTI (10 ms) and uplink TTI (20ms) the UL RLC SDU size has been chosen such that 2 SDUs will be returned per uplink TTI. i.e. the UL RLC SDU size is set equal to half the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).</p>						

18.1.2.43.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
 - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
 - for sub-test 6: RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 7: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 8: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the first 312 bits equal to the content of the test data sent by the SS in downlink.
 - for sub-test 9: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
 - for sub-test 12: RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 13: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 14: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.
 - for sub-test 15: RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 16: RLC SDUs on RB5 having the same content as sent by the SS; RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB6 and RB7.
 - for sub-test 17: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and RLC SDUs on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.43.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:384 kbps / PS RAB / 20 ms TTI

18.1.2.43.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.43.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.43 for the downlink 20 ms TTI case.

18.1.2.43.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	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)	RB8 (384 kbps, 20 ms)	DCCH
TFS	TF0, bits	1x0	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
	TF6, bits	N/A	N/A	N/A	16x336	N/A
	TF7, bits	N/A	N/A	N/A	20x336	N/A
TF8, bits	N/A	N/A	N/A	24x336	N/A	

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF0, TF1)
DL_TFC28	(TF1, TF0, TF0, TF0, TF1)
DL_TFC29	(TF2, TF1, TF1, TF0, TF1)
DL_TFC30	(TF0, TF0, TF0, TF1, TF1)
DL_TFC31	(TF1, TF0, TF0, TF1, TF1)
DL_TFC32	(TF2, TF1, TF1, TF1, TF1)
DL_TFC33	(TF0, TF0, TF0, TF2, TF1)
DL_TFC34	(TF1, TF0, TF0, TF2, TF1)
DL_TFC35	(TF2, TF1, TF1, TF2, TF1)
DL_TFC36	(TF0, TF0, TF0, TF3, TF1)
DL_TFC37	(TF1, TF0, TF0, TF3, TF1)
DL_TFC38	(TF2, TF1, TF1, TF3, TF1)
DL_TFC39	(TF0, TF0, TF0, TF4, TF1)
DL_TFC40	(TF1, TF0, TF0, TF4, TF1)
DL_TFC41	(TF2, TF1, TF1, TF4, TF1)
DL_TFC42	(TF0, TF0, TF0, TF5, TF1)
DL_TFC43	(TF1, TF0, TF0, TF5, TF1)
DL_TFC44	(TF2, TF1, TF1, TF5, TF1)
DL_TFC45	(TF0, TF0, TF0, TF6, TF1)
DL_TFC46	(TF1, TF0, TF0, TF6, TF1)
DL_TFC47	(TF2, TF1, TF1, TF6, TF1)
DL_TFC48	(TF0, TF0, TF0, TF7, TF1)
DL_TFC49	(TF1, TF0, TF0, TF7, TF1)
DL_TFC50	(TF2, TF1, TF1, TF7, TF1)
DL_TFC51	(TF0, TF0, TF0, TF8, TF1)
DL_TFC52	(TF1, TF0, TF0, TF8, TF1)
DL_TFC53	(TF2, TF1, TF1, TF8, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC28	UL_TFC1,U L_TFC16	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC29	UL_TFC2,U L_TFC17	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC30	UL_TFC3,U L_TFC19	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
4	DL_TFC4, DL_TFC31	UL_TFC4,U L_TFC19	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15,	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC32	UL_TFC5,U L_TFC20	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18 UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC33	UL_TFC6,U L_TFC21	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC34	UL_TFC7,U L_TFC22	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC35	UL_TFC8,U L_TFC23	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC36	UL_TFC9,U L_TFC24	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC37	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24 UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC38	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC39	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
13	DL_TFC13, DL_TFC40	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC41	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC42	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC43	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC44	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 3832
18	DL_TFC18, DL_TFC45	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 5112
19	DL_TFC19, DL_TFC46	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 5112
20	DL_TFC20, DL_TFC47	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
21	DL_TFC21, DL_TFC48	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 6392

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
22	DL_TFC22, DL_TFC49	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 6392
23	DL_TFC23, DL_TFC50	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 6392
24	DL_TFC24, DL_TFC51	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 7672
25	DL_TFC25, DL_TFC52	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 7672
26	DL_TFC26, DL_TFC53	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC27, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.43.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.

- for sub-test 25: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 26: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.44 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.44.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB / 10 ms TTI

18.1.2.44.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.44.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.44 for the downlink 10 ms TTI case.

18.1.2.44.1.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps)	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

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)	RB8 (2048 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x656	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A
	TF3, bits	N/A	N/A	N/A	4x656	N/A
	TF4, bits	N/A	N/A	N/A	8x656	N/A
	TF5, bits	N/A	N/A	N/A	12x656	N/A
	TF6, bits	N/A	N/A	N/A	16x656	N/A
	TF7, bits	N/A	N/A	N/A	20x656	N/A
	TF8, bits	N/A	N/A	N/A	24x656	N/A
	TF9, bits	N/A	N/A	N/A	28x656	N/A
TF10, bits	N/A	N/A	N/A	32x656	N/A	

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF9, TF0)
DL_TFC28	(TF1, TF0, TF0, TF9, TF0)
DL_TFC29	(TF2, TF1, TF1, TF9, TF0)
DL_TFC30	(TF0, TF0, TF0, TF10, TF0)
DL_TFC31	(TF1, TF0, TF0, TF10, TF0)
DL_TFC32	(TF2, TF1, TF1, TF10, TF0)
DL_TFC33	(TF0, TF0, TF0, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF1, TF1)
DL_TFC37	(TF1, TF0, TF0, TF1, TF1)
DL_TFC38	(TF2, TF1, TF1, TF1, TF1)
DL_TFC39	(TF0, TF0, TF0, TF2, TF1)
DL_TFC40	(TF1, TF0, TF0, TF2, TF1)
DL_TFC41	(TF2, TF1, TF1, TF2, TF1)
DL_TFC42	(TF0, TF0, TF0, TF3, TF1)
DL_TFC43	(TF1, TF0, TF0, TF3, TF1)
DL_TFC44	(TF2, TF1, TF1, TF3, TF1)
DL_TFC45	(TF0, TF0, TF0, TF4, TF1)
DL_TFC46	(TF1, TF0, TF0, TF4, TF1)
DL_TFC47	(TF2, TF1, TF1, TF4, TF1)
DL_TFC48	(TF0, TF0, TF0, TF5, TF1)
DL_TFC49	(TF1, TF0, TF0, TF5, TF1)
DL_TFC50	(TF2, TF1, TF1, TF5, TF1)
DL_TFC51	(TF0, TF0, TF0, TF6, TF1)
DL_TFC52	(TF1, TF0, TF0, TF6, TF1)
DL_TFC53	(TF2, TF1, TF1, TF6, TF1)
DL_TFC54	(TF0, TF0, TF0, TF7, TF1)
DL_TFC55	(TF1, TF0, TF0, TF7, TF1)
DL_TFC56	(TF2, TF1, TF1, TF7, TF1)
DL_TFC57	(TF0, TF0, TF0, TF8, TF1)
DL_TFC58	(TF1, TF0, TF0, TF8, TF1)
DL_TFC59	(TF2, TF1, TF1, TF8, TF1)
DL_TFC60	(TF0, TF0, TF0, TF9, TF1)
DL_TFC61	(TF1, TF0, TF0, TF9, TF1)
DL_TFC62	(TF2, TF1, TF1, TF9, TF1)
DL_TFC63	(TF0, TF0, TF0, TF10, TF1)
DL_TFC64	(TF1, TF0, TF0, TF10, TF1)
DL_TFC65	(TF2, TF1, TF1, TF10, TF1)

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC34	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC35	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC36	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 632
4	DL_TFC4, DL_TFC37	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632
5	DL_TFC5, DL_TFC38	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC6, DL_TFC39	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
7	DL_TFC7, DL_TFC40	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC8, DL_TFC41	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC9, DL_TFC42	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC10, DL_TFC43	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC44	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC12, DL_TFC45	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 5112
13	DL_TFC13, DL_TFC46	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC14, DL_TFC47	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
15	DL_TFC15, DL_TFC48	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 7672
16	DL_TFC16, DL_TFC49	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 7672
17	DL_TFC17, DL_TFC50	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
18	DL_TFC18, DL_TFC51	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 10232
19	DL_TFC19, DL_TFC52	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 10232

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC53	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
21	DL_TFC21, DL_TFC54	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 12792
22	DL_TFC22, DL_TFC55	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 12792
23	DL_TFC23, DL_TFC56	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 12792
24	DL_TFC24, DL_TFC57	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 15352
25	DL_TFC25, DL_TFC58	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 15352
26	DL_TFC26, DL_TFC59	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 15352
27	DL_TFC27, DL_TFC60	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 17912
28	DL_TFC28, DL_TFC61	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 17912

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC29, DL_TFC62	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
30	DL_TFC30, DL_TFC63	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 20472
31	DL_TFC31, DL_TFC64	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 20472
32	DL_TFC32, DL_TFC65	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC33, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 20 ms while the downlink TTI is 10 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over each TTI, i.e. the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.44.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

- for sub-test 26: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 27: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 28: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 29: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 30: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 31: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 32: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.44.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:2048 kbps / PS RAB / 20 ms TTI

18.1.2.44.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.44.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.44 for the downlink 20 ms TTI case.

18.1.2.44.2.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps)	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

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)	RB8 (2048 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x656	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A
	TF3, bits	N/A	N/A	N/A	4x656	N/A
	TF4, bits	N/A	N/A	N/A	8x656	N/A
	TF5, bits	N/A	N/A	N/A	12x656	N/A
	TF6, bits	N/A	N/A	N/A	16x656	N/A
	TF7, bits	N/A	N/A	N/A	20x656	N/A
	TF8, bits	N/A	N/A	N/A	24x656	N/A
	TF9, bits	N/A	N/A	N/A	28x656	N/A
	TF10, bits	N/A	N/A	N/A	32x656	N/A
	TF11, bits	N/A	N/A	N/A	36x656	N/A
	TF12, bits	N/A	N/A	N/A	40x656	N/A
	TF13, bits	N/A	N/A	N/A	44x656	N/A
	TF14, bits	N/A	N/A	N/A	48x656	N/A
	TF15, bits	N/A	N/A	N/A	52x656	N/A
	TF16, bits	N/A	N/A	N/A	56x656	N/A
	TF17, bits	N/A	N/A	N/A	60x656	N/A
TF18, bits	N/A	N/A	N/A	64x656	N/A	

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF6, TF0)
DL_TFC19	(TF1, TF0, TF0, TF6, TF0)
DL_TFC20	(TF2, TF1, TF1, TF6, TF0)
DL_TFC21	(TF0, TF0, TF0, TF7, TF0)
DL_TFC22	(TF1, TF0, TF0, TF7, TF0)
DL_TFC23	(TF2, TF1, TF1, TF7, TF0)
DL_TFC24	(TF0, TF0, TF0, TF8, TF0)
DL_TFC25	(TF1, TF0, TF0, TF8, TF0)
DL_TFC26	(TF2, TF1, TF1, TF8, TF0)
DL_TFC27	(TF0, TF0, TF0, TF9, TF0)
DL_TFC28	(TF1, TF0, TF0, TF9, TF0)
DL_TFC29	(TF2, TF1, TF1, TF9, TF0)
DL_TFC30	(TF0, TF0, TF0, TF10, TF0)
DL_TFC31	(TF1, TF0, TF0, TF10, TF0)
DL_TFC32	(TF2, TF1, TF1, TF10, TF0)
DL_TFC33	(TF0, TF0, TF0, TF11, TF0)
DL_TFC34	(TF1, TF0, TF0, TF11, TF0)
DL_TFC35	(TF2, TF1, TF1, TF11, TF0)
DL_TFC36	(TF0, TF0, TF0, TF12, TF0)
DL_TFC37	(TF1, TF0, TF0, TF12, TF0)
DL_TFC38	(TF2, TF1, TF1, TF12, TF0)
DL_TFC39	(TF0, TF0, TF0, TF13, TF0)
DL_TFC40	(TF1, TF0, TF0, TF13, TF0)
DL_TFC41	(TF2, TF1, TF1, TF13, TF0)
DL_TFC42	(TF0, TF0, TF0, TF14, TF0)
DL_TFC43	(TF1, TF0, TF0, TF14, TF0)
DL_TFC44	(TF2, TF1, TF1, TF14, TF0)
DL_TFC45	(TF0, TF0, TF0, TF15, TF0)
DL_TFC46	(TF1, TF0, TF0, TF15, TF0)
DL_TFC47	(TF2, TF1, TF1, TF15, TF0)
DL_TFC48	(TF0, TF0, TF0, TF16, TF0)
DL_TFC49	(TF1, TF0, TF0, TF16, TF0)
DL_TFC50	(TF2, TF1, TF1, TF16, TF0)
DL_TFC51	(TF0, TF0, TF0, TF17, TF0)
DL_TFC52	(TF1, TF0, TF0, TF17, TF0)
DL_TFC53	(TF2, TF1, TF1, TF17, TF0)
DL_TFC54	(TF0, TF0, TF0, TF18, TF0)
DL_TFC55	(TF1, TF0, TF0, TF18, TF0)
DL_TFC56	(TF2, TF1, TF1, TF18, TF0)
DL_TFC57	(TF0, TF0, TF0, TF0, TF1)
DL_TFC58	(TF1, TF0, TF0, TF0, TF1)
DL_TFC59	(TF2, TF1, TF1, TF0, TF1)
DL_TFC60	(TF0, TF0, TF0, TF1, TF1)

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC61	(TF1, TF0, TF0, TF1, TF1)
DL_TFC61	(TF2, TF1, TF1, TF1, TF1)
DL_TFC63	(TF0, TF0, TF0, TF2, TF1)
DL_TFC64	(TF1, TF0, TF0, TF2, TF1)
DL_TFC65	(TF2, TF1, TF1, TF2, TF1)
DL_TFC66	(TF0, TF0, TF0, TF3, TF1)
DL_TFC67	(TF1, TF0, TF0, TF3, TF1)
DL_TFC68	(TF2, TF1, TF1, TF3, TF1)
DL_TFC69	(TF0, TF0, TF0, TF4, TF1)
DL_TFC70	(TF1, TF0, TF0, TF4, TF1)
DL_TFC71	(TF2, TF1, TF1, TF4, TF1)
DL_TFC72	(TF0, TF0, TF0, TF5, TF1)
DL_TFC73	(TF1, TF0, TF0, TF5, TF1)
DL_TFC74	(TF2, TF1, TF1, TF5, TF1)
DL_TFC75	(TF0, TF0, TF0, TF6, TF1)
DL_TFC76	(TF1, TF0, TF0, TF6, TF1)
DL_TFC77	(TF2, TF1, TF1, TF6, TF1)
DL_TFC78	(TF0, TF0, TF0, TF7, TF1)
DL_TFC79	(TF1, TF0, TF0, TF7, TF1)
DL_TFC80	(TF2, TF1, TF1, TF7, TF1)
DL_TFC81	(TF0, TF0, TF0, TF8, TF1)
DL_TFC82	(TF1, TF0, TF0, TF8, TF1)
DL_TFC83	(TF2, TF1, TF1, TF8, TF1)
DL_TFC84	(TF0, TF0, TF0, TF9, TF1)
DL_TFC85	(TF1, TF0, TF0, TF9, TF1)
DL_TFC86	(TF2, TF1, TF1, TF9, TF1)
DL_TFC87	(TF0, TF0, TF0, TF10, TF1)
DL_TFC88	(TF1, TF0, TF0, TF10, TF1)
DL_TFC89	(TF2, TF1, TF1, TF10, TF1)
DL_TFC90	(TF0, TF0, TF0, TF11, TF1)
DL_TFC91	(TF1, TF0, TF0, TF11, TF1)
DL_TFC92	(TF2, TF1, TF1, TF11, TF1)
DL_TFC93	(TF0, TF0, TF0, TF12, TF1)
DL_TFC94	(TF1, TF0, TF0, TF12, TF1)
DL_TFC95	(TF2, TF1, TF1, TF12, TF1)
DL_TFC96	(TF0, TF0, TF0, TF13, TF1)
DL_TFC97	(TF1, TF0, TF0, TF13, TF1)
DL_TFC98	(TF2, TF1, TF1, TF13, TF1)
DL_TFC99	(TF0, TF0, TF0, TF14, TF1)
DL_TFC100	(TF1, TF0, TF0, TF14, TF1)
DL_TFC101	(TF2, TF1, TF1, TF14, TF1)
DL_TFC102	(TF0, TF0, TF0, TF15, TF1)
DL_TFC103	(TF1, TF0, TF0, TF15, TF1)
DL_TFC104	(TF2, TF1, TF1, TF15, TF1)
DL_TFC105	(TF0, TF0, TF0, TF16, TF1)
DL_TFC106	(TF1, TF0, TF0, TF16, TF1)
DL_TFC107	(TF2, TF1, TF1, TF16, TF1)
DL_TFC108	(TF0, TF0, TF0, TF17, TF1)
DL_TFC109	(TF1, TF0, TF0, TF17, TF1)
DL_TFC110	(TF2, TF1, TF1, TF17, TF1)
DL_TFC111	(TF0, TF0, TF0, TF18, TF1)
DL_TFC112	(TF1, TF0, TF0, TF18, TF1)
DL_TFC113	(TF2, TF1, TF1, TF18, TF1)

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC58	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC59	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC60	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 632
4	DL_TFC4, DL_TFC61	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18 UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 632
5	DL_TFC5, DL_TFC62	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632
6	DL_TFC6, DL_TFC63	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 1272
7	DL_TFC7, DL_TFC64	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 1272
8	DL_TFC8, DL_TFC65	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
9	DL_TFC9, DL_TFC66	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 2552
10	DL_TFC10, DL_TFC67	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 2552

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC68	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9 UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
12	DL_TFC12, DL_TFC69	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 5112
13	DL_TFC13, DL_TFC70	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 5112
14	DL_TFC14, DL_TFC71	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 5112
15	DL_TFC15, DL_TFC72	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 7672
16	DL_TFC16, DL_TFC73	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 7672
17	DL_TFC17, DL_TFC74	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27 UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 7672
18	DL_TFC18, DL_TFC75	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 10232
19	DL_TFC19, DL_TFC76	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 10232

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC77	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 10232
21	DL_TFC21, DL_TFC78	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 12792
22	DL_TFC22, DL_TFC79	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 12792
23	DL_TFC23, DL_TFC80	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 12792
24	DL_TFC24, DL_TFC81	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 15352
25	DL_TFC25, DL_TFC82	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 15352
26	DL_TFC26, DL_TFC83	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 15352
27	DL_TFC27, DL_TFC84	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 17912
28	DL_TFC28, DL_TFC85	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 17912

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC29, DL_TFC86	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 17912
30	DL_TFC30, DL_TFC87	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 20472
31	DL_TFC31, DL_TFC88	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 20472
32	DL_TFC32, DL_TFC89	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 20472
33	DL_TFC33, DL_TFC90	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 23032
34	DL_TFC34, DL_TFC91	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 23032
35	DL_TFC35, DL_TFC92	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 23032
36	DL_TFC36, DL_TFC93	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 25592
37	DL_TFC37, DL_TFC94	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 25592

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
38	DL_TFC38, DL_TFC95	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 25592
39	DL_TFC39, DL_TFC96	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 28152
40	DL_TFC40, DL_TFC97	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 28152
41	DL_TFC41, DL_TFC98	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 28152
42	DL_TFC42, DL_TFC99	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 30712
43	DL_TFC43, DL_TFC100	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 30712
44	DL_TFC44, DL_TFC101	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 30712
45	DL_TFC45, DL_TFC102	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 33272
46	DL_TFC46, DL_TFC103	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 33272

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
47	DL_TFC47, DL_TFC104	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 33272
48	DL_TFC48, DL_TFC105	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 35832
49	DL_TFC49, DL_TFC106	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 35832
50	DL_TFC50, DL_TFC107	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 35832
51	DL_TFC51, DL_TFC108	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 38392
52	DL_TFC52, DL_TFC109	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 38392
53	DL_TFC53, DL_TFC110	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 38392
54	DL_TFC54, DL_TFC111	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 40952
55	DL_TFC55, DL_TFC112	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 40952

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
56	DL_TFC56, DL_TFC113	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC57, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 40952
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.44.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 6: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 7: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 8: an RLC SDU on RB8 having the content equal to the first 632 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
 - for sub-test 9: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 10: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 11: an RLC SDU on RB8 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

- for sub-test 52: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 53: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.
- for sub-test 54: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 55: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 56: an RLC SDU on RB8 having the content equal to the first 2552 bits of the test data sent by the SS in downlink; an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.45 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:57.6 DL:57.6 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.45.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.45.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.45.

18.1.2.45.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (57.6 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	2x576	N/A
	TF3, bits	N/A	N/A	N/A	3x576	N/A
	TF4, bits	N/A	N/A	N/A	4x576	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)	RB8 (57.6 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	2x576	N/A
	TF3, bits	N/A	N/A	N/A	3x576	N/A
	TF4, bits	N/A	N/A	N/A	4x576	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC16	UL_TFC1, DL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, DL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 576
4	DL_TFC4, DL_TFC19	UL_TFC4, DL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 576
5	DL_TFC5, DL_TFC20	UL_TFC5, DL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 576
6	DL_TFC6, DL_TFC21	UL_TFC6, DL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 1152	RB5: No data RB6: No data RB7: No data RB8: 1152
7	DL_TFC7, DL_TFC22	UL_TFC7, DL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 1152	RB5: 39 RB6: No data RB7: No data RB8: 1152
8	DL_TFC8, DL_TFC23	UL_TFC8, DL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 1152	RB5: 81 RB6: 103 RB7: 60 RB8: 1152
9	DL_TFC9, DL_TFC24	UL_TFC9, DL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 1728	RB5: No data RB6: No data RB7: No data RB8: 1728
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 1728	RB5: 39 RB6: No data RB7: No data RB8: 1728

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
11	DL_TFC11, DL_TFC26	UL_TFC11, DL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 1728	RB5: 81 RB6: 103 RB7: 60 RB8: 1728
12	DL_TFC12, DL_TFC27	UL_TFC12, DL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC26	RB5: 39 RB6: 103 RB7: 60 RB8: 2304	RB5: No data RB6: No data RB7: No data RB8: 2304
13	DL_TFC13, DL_TFC28	UL_TFC13, DL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 2304	RB5: 39 RB6: No data RB7: No data RB8: 2304
14	DL_TFC14, DL_TFC29	UL_TFC14, DL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 2304	RB5: 81 RB6: 103 RB7: 60 RB8: 2304
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test .						

18.1.2.45.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified in the actual sub test.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3, 6, 9 and 12: an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4, 7, 10 and 13: an RLC SDU on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5, 8, 11 and 14: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.46 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.46.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.46.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.46.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps., the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.1 (Streaming/unknown/UL:14.4 kbps) is used in uplink.

18.1.2.46.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (14.4 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x576	0x148
	TF1, bits	1x39	1x103	1x60	1x576	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x320	0x148
	TF1, bits	1x39	1x103	1x60	1x320	1x148
	TF2, bits	1x81	N/A	N/A	2x320	N/A
	TF3, bits	N/A	N/A	N/A	4x320	N/A
	TF4, bits	N/A	N/A	N/A	8x320	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 320 (note 2)
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 320 (note 2)
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 320 (note 2)
6	DL_TFC6, DL_TFC21	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 640 (note 3)
7	DL_TFC7, DL_TFC22	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 640 (note 3)
8	DL_TFC8, DL_TFC23	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 640 (note 3)
9	DL_TFC9, DL_TFC24	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 1280 (note 4)

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
10	DL_TFC10, DL_TFC25	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 1280 (note 4)
11	DL_TFC11, DL_TFC26	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 1280 (note 4)
12	DL_TFC12, DL_TFC27	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: No data RB6: No data RB7: No data RB8: 2560 (note 5)
13	DL_TFC13, DL_TFC28	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 576	RB5: 39 RB6: No data RB7: No data RB8: 2560 (note 5)
14	DL_TFC14, DL_TFC29	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 576	RB5: 81 RB6: 103 RB7: 60 RB8: 2560 (note 5)
<p>NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.</p> <p>NOTE 2: RB8: SS is using a DL RLC SDU with 320 bits as test data (=DL RLC PDU size for DL/TF1). UE will return one RLC PDU. SS creates an UL RLC SDU from the first 320 bits of the received RLC PDU.</p> <p>NOTE 3: RB8: SS is using a DL RLC SDU size of 640 bits as test data (=DL RLC PDU size for DL/TF2). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>NOTE 4: RB8: SS is using a DL RLC SDU size of 1280 bits as test data (=DL RLC PDU size for DL/TF3). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>NOTE 5: RB8: SS is using a DL RLC SDU size of 2560 bits as test data (=DL RLC PDU size for DL/TF4). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TFS size under test</p>						

18.1.2.46.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified in the actual sub test.
3. At step 15 the UE shall return
 - for sub-test 3, 6, 9 and 12: no data on RB5, RB6 and RB7.

- for sub-test 1, 4, 7, 10 and 13: an RLC SDU on RB5 having the same content as sent by the SS; and no data shall be received on RB6 or RB7.
- for sub-test 2, 5, 8, 11 and 14: an RLC SDU on each of RB5, RB6 and RB7 having the same content as sent by the SS.
- for sub-test 1 to 2: no data on RB8.
- for sub-test 3 to 5: an RLC SDU on RB8 having the same content as sent by the SS.
- for sub-test 6 to 14: an RLC SDU on RB5 having the same content as the first 576 bits of the RLC SDU sent by the SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.47 Void

18.1.2.48 Void

18.1.2.49 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.49.1 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI

18.1.2.49.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.49.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.49 for the 20 ms TTI case.

18.1.2.49.1.3 Method of test

See 18.1.1.2 for test procedure.

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 (RB8):

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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	2x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, DL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, DL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, DL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: No data RB6: No data RB7: No data RB8: 2x640
4	DL_TFC4, DL_TFC10	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: 2x640
5	DL_TFC5, DL_TFC11	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: 2x640

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

See 18.1.1.1 for test procedure.

18.1.2.49.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by the SS; and no data shall be received on RB8.
 - for sub-test 3: RLC SDUs on RB8 having the same content as sent by the SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: RLC SDUs on RB5 and RB8 having the same content as sent by the SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.49.2 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI

18.1.2.49.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.49.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.49 for the 40 ms TTI case.

18.1.2.49.2.3 Method of test

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 (RB8):

Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	4x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x640	0x148
	TF1, bits	1x39	1x103	1x60	4x640	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, DL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC8	UL_TFC2, DL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC9	UL_TFC3, DL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: No data RB6: No data RB7: No data RB8: 4x640
4	DL_TFC4, DL_TFC10	UL_TFC4, DL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 640	RB5: 39 RB6: No data RB7: No data RB8: 4x640
5	DL_TFC5, DL_TFC11	UL_TFC5, DL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 640	RB5: 81 RB6: 103 RB7: 60 RB8: 4x640
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

18.1.2.49.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: four RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: an RLC SDU on RB5 and four RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - - for sub-test 5: an RLC SDU on RB5, RB6 and RB7; and four RLC SDUs on RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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

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

18.1.2.50.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.50.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.50 for the 20 ms TTI case.

18.1.2.50.1.3 Method of test

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 and RB6):

	RB5 (64 kbps)	RB6 (64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE <i>SDU Discard Mode</i> Timer based no explicit Timer_discard	FALSE 100ms	FALSE 100ms
Downlink RLC TM RLC Segmentation indication	FALSE	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.		

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	2x640	2x640	1x148
	TF2, bits	N/A	N/A	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, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	2x640	2x640	1x148
	TF2, bits	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF0, TF1, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC5	UL_TFC1, DL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 640 RB6: 640	RB5: 2x640 RB6: No data
2	DL_TFC2, DL_TFC6	UL_TFC2, DL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 640 RB6: 640	RB5: No data RB6: 2x640
3	DL_TFC3, DL_TFC7	UL_TFC3, DL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 640 RB6: 640	RB5: 2x640 RB6: 2x640
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

18.1.2.50.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 2: two RLC SDUs on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 3: two RLC SDUs on RB5 and RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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

18.1.2.50.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.50.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.50 for the 40 ms TTI case.

18.1.2.50.2.3 Method of test

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 and RB6):

	RB5 (64 kbps)	RB6 (64 kbps)
Uplink RLC TM RLC Segmentation indication Transmission RLC discard CHOICE <i>SDU Discard Mode</i> Timer based no explicit Timer_discard	FALSE 100ms	FALSE 100ms
Downlink RLC TM RLC Segmentation indication	FALSE	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 .		

See 18.1.1.2 for test procedure.

Uplink TFS:

	TF	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	4x640	4x640	1x148
	TF2, bits	N/A	N/A	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, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TF	RB5 (64 kbps)	RB6 (64 kbps)	DCCH
TFS	TF0, bits	0x640	0x640	0x148
	TF1, bits	4x640	4x640	1x148
	TF2, bits	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF0, TF1, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC5	UL_TFC1, DL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 640 RB6: 640	RB5: 4x640 RB6: No data
2	DL_TFC2, DL_TFC6	UL_TFC2, DL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 640 RB6: 640	RB5: No data RB6: 4x640
3	DL_TFC3, DL_TFC7	UL_TFC3, DL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 640 RB6: 640	RB5: 4x640 RB6: 4x640
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

18.1.2.50.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 2: four RLC SDUs on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 3: four RLC SDUs on RB5 and RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.51 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.51.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB

18.1.2.51.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.51.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 20 ms TTI case.

18.1.2.51.1.3 Method of test

See 18.1.1.2 for test procedure.

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 <i>SDU Discard Mode</i> 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 .	

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps, 20 ms TTI)	RB6 (I/B 64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	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	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps, 20 ms TTI)	RB6 (I/B 64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	3x336	N/A
	TF4, bits	N/A	4x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 2x640 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 1272
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 equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).					

18.1.2.51.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

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

2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1, 2, 3, 4: RLC SDUs on RB6 having the same content as sent by the SS; and no data shall be received on RB5.
 - for sub-test 5: RLC SDUs on RB5 having the same content as sent by the SS; and no data shall be received on RB6.
 - for sub-test 6, 7, 8 and 9: RLC SDUs on RB5 and RB6 having the same content as sent by the SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.51.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:64 DL:64 kbps / PS RAB

18.1.2.51.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.51.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 40 ms TTI case.

18.1.2.51.2.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (/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	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (/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

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 952
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC5, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC6, UL_TFC10, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 4x640 RB6: 952
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: 1272
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size .</p>						

18.1.2.51.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 6, 7, 8 and 9: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.52 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:64 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.52.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:64 DL:128 kbps / PS RAB

18.1.2.52.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.52.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.52 for the 20 ms TTI case.

18.1.2.52.1.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 64 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	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	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 2x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 2552
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TB size.</p>						

18.1.2.52.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 6: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
 - For sub-test 3: RLC SDU on RB6 having the content equal to the first 952 bits of the test data sent by the SS in downlink;
 - For sub-test 4: RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;
 - for sub-test 8: an RLC SDU on RB6 having the content equal to the first 952 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS.
 - for sub-test 9: an RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.52.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:64 DL:128 kbps / PS RAB

18.1.2.52.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.52.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51 for the 40 ms TTI case.

18.1.2.52.2.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (/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	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	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

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCS Under Test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCSs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 952	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 1272	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data

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)
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 952	RB5: 4x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC15, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 1272	RB5: 4x640 RB6: 2552
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit), and the UL RLC SDU size for RB5 has been set equal to the uplink TB size .</p>						

18.1.2.52.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 6: four RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
 - For sub-test 3: RLC SDU on RB6 having the content equal to the first 652 bits of the test data sent by the SS in downlink;
 - For sub-test 4: RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;

- for sub-test 8: an RLC SDU on RB6 having the content equal to the first 652 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS.
- for sub-test 9: an RLC SDU on RB6 having the content equal to the first 1272 bits of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.53 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.53.1 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 20 ms TTI + Interactive or background / UL:128 DL:128 kbps / PS RAB

18.1.2.53.1.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.53.1.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.53 for the 20 ms TTI case.

18.1.2.53.1.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148
	TF2, bits	N/A	2x336	N/A
	TF3, bits	N/A	4x336	N/A
	TF4, bits	N/A	8x336	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, DL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC12	UL_TFC2, DL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, DL_TFC13	UL_TFC3, DL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
4	DL_TFC4, DL_TFC14	UL_TFC4, DL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 2552	RB5: No data RB6: 2552
5	DL_TFC5, DL_TFC15	UL_TFC5, DL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 2x640 RB6: No data
6	DL_TFC6, DL_TFC16	UL_TFC6, DL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 2x640 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC7, DL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 2x640 RB6: 632
8	DL_TFC8, DL_TFC18	UL_TFC8, DL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 640 RB6: 1272	RB5: 2x640 RB6: 1272
9	DL_TFC9, DL_TFC19	UL_TFC9, DL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 2552	RB5: 2x640 RB6: 2552
<p>NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit) and the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test.</p>						

18.1.2.53.1.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 6, 7, 8 and 9: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.53.2 Conversational / unknown / UL:64 DL:64 kbps / CS RAB / 40 ms TTI + Interactive or background / UL:128 DL:128 kbps / PS RAB

18.1.2.53.2.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.53.2.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.53 for the 40 ms TTI case.

18.1.2.53.2.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	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

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF2, TF0)
UL_TFC3	(TF0, TF3, TF0)
UL_TFC4	(TF0, TF4, TF0)
UL_TFC5	(TF1, TF0, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF1, TF2, TF0)
UL_TFC8	(TF1, TF3, TF0)
UL_TFC9	(TF1, TF4, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF0, TF1, TF1)
UL_TFC12	(TF0, TF2, TF1)
UL_TFC13	(TF0, TF3, TF1)
UL_TFC14	(TF0, TF4, TF1)
UL_TFC15	(TF1, TF0, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF1, TF2, TF1)
UL_TFC18	(TF1, TF3, TF1)
UL_TFC19	(TF1, TF4, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 128 kbps)	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

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF0, TF1, TF0)
DL_TFC2	(TF0, TF2, TF0)
DL_TFC3	(TF0, TF3, TF0)
DL_TFC4	(TF0, TF4, TF0)
DL_TFC5	(TF1, TF0, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF1, TF2, TF0)
DL_TFC8	(TF1, TF3, TF0)
DL_TFC9	(TF1, TF4, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF0, TF1, TF1)
DL_TFC12	(TF0, TF2, TF1)
DL_TFC13	(TF0, TF3, TF1)
DL_TFC14	(TF0, TF4, TF1)
DL_TFC15	(TF1, TF0, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF1, TF2, TF1)
DL_TFC18	(TF1, TF3, TF1)
DL_TFC19	(TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, UL_TFC11	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 640 RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, UL_TFC12	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 640 RB6: 632	RB5: No data RB6: 632
3	DL_TFC3, UL_TFC13	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 640 RB6: 1272	RB5: No data RB6: 1272
4	DL_TFC4, UL_TFC14	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 640 RB6: 2552	RB5: No data RB6: 2552
5	DL_TFC5, UL_TFC15	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 640 RB6: 312	RB5: 4x640 RB6: No data
6	DL_TFC6, UL_TFC16	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 640 RB6: 312	RB5: 4x640 RB6: 312
7	DL_TFC7, UL_TFC17	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 640 RB6: 632	RB5: 4x640 RB6: 632
8	DL_TFC8, UL_TFC18	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 4x640 RB6: 1272	RB5: 4x640 RB6: 1272
9	DL_TFC9, UL_TFC19	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 640 RB6: 2552	RB5: 4x640 RB6: 2552

NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test.

18.1.2.53.2.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 3, 4: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5: four RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 6, 7, 8 and 9: four RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.54 Interactive or background / UL:64 DL:128 kbps / PS RAB + Streaming / unknown / UL:0 DL:64 kbps / CS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.54.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.54.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.54.

To be able to test the downlink radio bearer using the UE loopback function for the reference radio bearer UL:0 DL: 64 kbps, the reference radio bearer configuration according to TS 34.108, clause 6.11.5.4.1.15.1 (Streaming/unknown/UL:14.4 kbps) is used in uplink.

18.1.2.54.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (I/B 64 kbps)	RB6 (Str. 14.4 kbps)	DCCH
TFS	TF0, bits	0x336	0x576	0x148
	TF1, bits	1x336	1x576	1x148
	TF2, bits	2x336	N/A	N/A
	TF3, bits	3x336	N/A	N/A
	TF4, bits	4x336	N/A	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	(TF4, TF0, TF0)
UL_TFC5	(TF0, TF1, TF0)
UL_TFC6	(TF1, TF1, TF0)
UL_TFC7	(TF2, TF1, TF0)
UL_TFC8	(TF3, TF1, TF0)
UL_TFC9	(TF4, TF1, TF0)
UL_TFC10	(TF0, TF0, TF1)
UL_TFC11	(TF1, TF0, TF1)
UL_TFC12	(TF2, TF0, TF1)
UL_TFC13	(TF3, TF0, TF1)
UL_TFC14	(TF4, TF0, TF1)
UL_TFC15	(TF0, TF1, TF1)
UL_TFC16	(TF1, TF1, TF1)
UL_TFC17	(TF2, TF1, TF1)
UL_TFC18	(TF3, TF1, TF1)
UL_TFC19	(TF4, TF1, TF1)

Downlink TFS:

	TFI	RB5 (I/B 128 kbps)	RB6 (Str. 64 kbps)	DCCH
TFS	TF0, bits	0x336	0x320	0x148
	TF1, bits	1x336	1x320	1x148
	TF2, bits	2x336	2x320	N/A
	TF3, bits	4x336	4x320	N/A
	TF4, bits	8x336	8x320	N/A

Downlink TFCS:

TFCI	(RB5, RB6, DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF0, TF0)
DL_TFC3	(TF3, TF0, TF0)
DL_TFC4	(TF4, TF0, TF0)
DL_TFC5	(TF0, TF1, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF2, TF1, TF0)
DL_TFC8	(TF3, TF1, TF0)
DL_TFC9	(TF4, TF1, TF0)
DL_TFC10	(TF0, TF2, TF0)
DL_TFC11	(TF1, TF2, TF0)
DL_TFC12	(TF2, TF2, TF0)
DL_TFC13	(TF3, TF2, TF0)
DL_TFC14	(TF4, TF2, TF0)
DL_TFC15	(TF0, TF3, TF0)
DL_TFC16	(TF1, TF3, TF0)
DL_TFC17	(TF2, TF3, TF0)
DL_TFC18	(TF3, TF3, TF0)
DL_TFC19	(TF4, TF3, TF0)
DL_TFC20	(TF0, TF4, TF0)
DL_TFC21	(TF1, TF4, TF0)
DL_TFC22	(TF2, TF4, TF0)
DL_TFC23	(TF3, TF4, TF0)
DL_TFC24	(TF4, TF4, TF0)

TFCI	(RB5, RB6, DCCH)
DL_TFC25	(TF0, TF0, TF1)
DL_TFC26	(TF1, TF0, TF1)
DL_TFC27	(TF2, TF0, TF1)
DL_TFC28	(TF3, TF0, TF1)
DL_TFC29	(TF4, TF0, TF1)
DL_TFC30	(TF0, TF1, TF1)
DL_TFC31	(TF1, TF1, TF1)
DL_TFC32	(TF2, TF1, TF1)
DL_TFC33	(TF3, TF1, TF1)
DL_TFC34	(TF4, TF1, TF1)
DL_TFC35	(TF0, TF2, TF1)
DL_TFC36	(TF1, TF2, TF1)
DL_TFC37	(TF2, TF2, TF1)
DL_TFC38	(TF3, TF2, TF1)
DL_TFC39	(TF4, TF2, TF1)
DL_TFC40	(TF0, TF3, TF1)
DL_TFC41	(TF1, TF3, TF1)
DL_TFC42	(TF2, TF3, TF1)
DL_TFC43	(TF3, TF3, TF1)
DL_TFC44	(TF4, TF3, TF1)
DL_TFC45	(TF0, TF4, TF1)
DL_TFC46	(TF1, TF4, TF1)
DL_TFC47	(TF2, TF4, TF1)
DL_TFC48	(TF3, TF4, TF1)
DL_TFC49	(TF4, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
1	DL_TFC1, DL_TFC26	UL_TFC1, UL_TFC11	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC10, UL_TFC11	RB5: 312 RB6: 576	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC27	UL_TFC2, UL_TFC12	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC10, UL_TFC12	RB5: 632 RB6: 576	RB5: 632 RB6: No data
3	DL_TFC3, DL_TFC28	UL_TFC3, UL_TFC13	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC10, UL_TFC13	RB5: 952 RB6: 576	RB5: 1272 RB6: No data
4	DL_TFC4, DL_TFC29	UL_TFC4, UL_TFC14	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC10, UL_TFC14	RB5: 1272 RB6: 576	RB5: 2552 RB6: No data
5	DL_TFC5, DL_TFC30	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 320 (note 2)
6	DL_TFC6, DL_TFC31	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 320 (note 2)

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
7	DL_TFC7, DL_TFC32	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5 UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 320 (note 2)
8	DL_TFC8, DL_TFC33	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5 UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 320 (note 2)
9	DL_TFC9, DL_TFC34	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 320 (note 2)
10	DL_TFC10, DL_TFC35	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 640 (note 3)
11	DL_TFC11, DL_TFC36	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 640 (note 3)
12	DL_TFC12, DL_TFC37	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5 UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 640 (note 3)
13	DL_TFC13, DL_TFC38	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 640 (note 3)
14	DL_TFC14, DL_TFC39	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 640 (note 3)
15	DL_TFC15, DL_TFC40	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 1280 (note 4)

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
16	DL_TFC16, DL_TFC41	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 1280 (note 4)
17	DL_TFC17, DL_TFC42	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 1280 (note 4)
18	DL_TFC18, DL_TFC43	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 1280 (note 4)
19	DL_TFC19, DL_TFC44	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 1280 (note 4)
20	DL_TFC20, DL_TFC45	UL_TFC5, UL_TFC15	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC5, UL_TFC10, UL_TFC15	RB5: 312 RB6: 576	RB5: No data RB6: 2560 (note 5)
21	DL_TFC21, DL_TFC46	UL_TFC6, UL_TFC16	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6, UL_TFC10, UL_TFC11, UL_TFC15, UL_TFC16	RB5: 312 RB6: 576	RB5: 312 RB6: 2560 (note 5)
22	DL_TFC22, DL_TFC47	UL_TFC7, UL_TFC17	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7, UL_TFC10, UL_TFC12, UL_TFC15, UL_TFC17	RB5: 632 RB6: 576	RB5: 632 RB6: 2560 (note 5)

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note 1)	Test data size (bits) (note 1)
23	DL_TFC23, DL_TFC48	UL_TFC8, UL_TFC18	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC3, UL_TFC5, UL_TFC8, UL_TFC10, UL_TFC13, UL_TFC15, UL_TFC18	RB5: 952 RB6: 576	RB5: 1272 RB6: 2560 (note 5)
24	DL_TFC24, DL_TFC49	UL_TFC9, UL_TFC19	DL_TFC0, DL_TFC25, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC4, UL_TFC5, UL_TFC9, UL_TFC10, UL_TFC14, UL_TFC15, UL_TFC19	RB5: 1272 RB6: 576	RB5: 2552 RB6: 2560 (note 5)
<p>NOTE 1: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.</p> <p>NOTE 2: RB6: SS is using a DL RLC SDU with 320 bits as test data (=DL RLC PDU size for DL/TF1). UE will return one RLC PDU. SS creates an UL RLC SDU from the first 320 bits of the received RLC PDU.</p> <p>NOTE 3: RB6: SS is using a DL RLC SDU size of 640 bits as test data (=DL RLC PDU size for DL/TF2). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>NOTE 4: RB6: SS is using a DL RLC SDU size of 1280 bits as test data (=DL RLC PDU size for DL/TF3). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>NOTE 5: RB6: SS is using a DL RLC SDU size of 2560 bits as test data (=DL RLC PDU size for DL/TF4). UE will return one RLC PDU. SS creates an UL RLC SDU from the received RLC PDU.</p> <p>RB5: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit) and the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test.</p>						

18.1.2.54.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual subtest.
3. At step 15 the UE shall return
 - for sub-test 1, 2, 6, 7, 11, 12, 16, 17, 21, 22: an RLC SDU on RB5 having the same content as sent by the SS.
 - for sub-test 5, 10, 15 and 20: no data shall be received on RB5.
 - for sub-test 1 to 4: no data shall be received on RB6.
 - for sub-test 5 to 9: an RLC SDU on RB6 having the same content as sent by the SS.
 - for sub-test 10, 11, 12, 15, 16, 17, 20, 21 and 22: an RLC SDU on RB5 having the same content as the first 576 bits of the RLC SDU sent by the SS.
 - For sub-test 3,8,13,18,23: an RLC SDU on RB5 having the content equal to the first 952 bits of the test data sent by the SS in downlink;
 - For sub-test 4,9,14,19,24: an RLC SDU on RB5 having the content equal to the first 1272 bits of the test data sent by the SS in downlink;

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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

18.1.2.55.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.55.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23a for the 40 ms TTI case.

18.1.2.55.3 Method of test

Uplink TFS:

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

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC0, UL_TFC1	RB5: 312	RB5: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.						

See 18.1.1.1 for test procedure.

18.1.2.55.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.56.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.56.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23b for 40 ms TTI case.

18.1.2.56.3 Method of test

Uplink TFS:

	TF	RB5 (16 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	n/a

Uplink TFCS:

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

Downlink TFS:

	TF	RB5 (8 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	n/a

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC4	UL_TFC1, UL_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312	RB5: 312
2	DL_TFC2, DL_TFC5	UL_TFC2, UL_TFC5	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632	RB5: 632

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

See 18.1.1.1 for test procedure.

18.1.2.56.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

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

18.1.2.57.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.57.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.23c for 40 ms TTI case.

18.1.2.57.3 Method of test

Uplink TFS:

	TF	RB5 (32 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	n/a
	TF3, bits	3x336	n/a
	TF4, bits	4x336	n/a

Uplink TFCS:

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

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC6	UL_TFC1, UL_TFC6	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312	RB5: 312
2	DL_TFC2, DL_TFC7	UL_TFC2, UL_TFC7	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632	RB5: 632
3	DL_TFC3, DL_TFC8	UL_TFC3, UL_TFC8	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952	RB5: 952
4	DL_TFC4, DL_TFC9	UL_TFC4, UL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	RB5: 1272

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

See 18.1.1.1 for test procedure.

18.1.2.57.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

18.1.2.58 Interactive or background / UL:256 DL:64 kbps / PS RAB / 20 ms TTI+ UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.58.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.58.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.62 for 20 ms TTI case.

18.1.2.58.3 Method of test

Uplink TFS:

	TFI	RB5 (256 kbps)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	n/a
	TF3, bits	4x336	n/a
	TF4, bits	8x336	n/a
	TF5, bits	16x336	n/a

Uplink TFCS:

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

Downlink TFS:

	TFI	RB5 (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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCS Under test	Uplink TFCS Under test	Implicitly tested	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC6	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC6		UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312	RB5: 312
2	DL_TFC2, DL_TFC7	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC6		UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632	RB5: 632
3	DL_TFC3, DL_TFC8	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC6		UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 1272	RB5: 952
4	DL_TFC4, DL_TFC9	UL_TFC4, UL_TFC10	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC6		UL_TFC0, UL_TFC4, UL_TFC6, UL_TFC10	RB5: 2552	RB5: 1272
5	DL_TFC4, DL_TFC9	UL_TFC5, UL_TFC11	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC6		UL_TFC0, UL_TFC5, UL_TFC6, UL_TFC11	RB5: 5112	RB5: 1272
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.							

See 18.1.1.1 for test procedure.

18.1.2.58.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

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

- for sub-test 3: RB5/TF3 (4x336).
- for sub-test 4: RB5/TF4 (8x336).
- for sub-test 5: RB5/TF5 (16x336).

3. At step 15 the UE shall return

- for sub-test 1 to 6: an RLC SDU on RB5 having the same content as the DL RLC SDU sent by the S.

18.1.2.59 Streaming / unknown / UL:16 DL:32 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.59.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.59.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.63 for 20 ms TTI case.

18.1.2.59.3 Method of test

Uplink TFS:

	TF	RB5 (16 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

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, TF0,TF1)
UL_TFC5	(TF1, TF0,TF1)
UL_TFC6	(TF0, TF1,TF1)
UL_TFC7	(TF1, TF1,TF1)

Downlink TFS:

	TF	RB5 (32 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148
	TF2, bits	2x336	N/A	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC7	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC8	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 632 RB6: No data
3	DL_TFC3, DL_TFC9	UL_TFC2, UL_TFC6	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6	RB5: No data RB6: 312	RB5: No data RB6: 312
4	DL_TFC4 DL_TFC10	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC1, DL_TFC3, DL_TFC6, DL_TFC7, DL_TFC9,UL_TF C0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 312 RB6: 312
5	DL_TFC5, DL_TFC11	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC2, DL_TFC3, DL_TFC6, DL_TFC8, DL_TFC9, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 632 RB6: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

See 18.1.1.1 for test procedure.

18.1.2.59.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6;.
 - for sub-test 2: 2 RLC SDU on RB5 having the content equal to the first 312 bits of the test data sent by sent by SS; and no data shall be received on RB6.
 - for sub-test 3: an RLC SDUs on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 4: 1 RLC SDU on RB5 and an RLC SDUs on RB6 having the same content as sent by SS..
 - for sub-test 5: 2 RLC SDU on RB5 having the content equal to the first 312 bits of the test data sent by sent by SS and an RLC SDUs on RB6 having the same content as sent by SS.

18.1.2.60 Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.60.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.60.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.58.

18.1.2.60.3 Method of test

Uplink TFS:

	TFI	RB5 (16 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

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, TF0,TF1)
UL_TFC5	(TF1, TF0,TF1)
UL_TFC6	(TF0, TF1,TF1)
UL_TFC7	(TF1, TF1,TF1)

Downlink TFS:

	TFI	RB5 (64 kbps TTI 40ms)	RB6 (8 kbps TTI 40ms))	DCCH
TFS	TF0, bits	0x656	0x336	0x148
	TF1, bits	1x656	1x336	1x148
	TF2, bits	2x656	N/A	N/A
	TF3, bits	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5,RB6 DCCH)
DL_TFC0	(TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0)
DL_TFC2	(TF2,TF0,TF0)
DL_TFC3	(TF3,TF0,TF0)
DL_TFC4	(TF0,TF1,TF0)
DL_TFC5	(TF1,TF1,TF0)
DL_TFC6	(TF2,TF1,TF0)
DL_TFC7	(TF3,TF1,TF0)
DL_TFC8	(TF0,TF0,TF1)
DL_TFC9	(TF1,TF0,TF1)
DL_TFC10	(TF2,TF0,TF1)
DL_TFC11	(TF3,TF0,TF1)
DL_TFC12	(TF0,TF1,TF1)
DL_TFC13	(TF1,TF1,TF1)
DL_TFC14	(TF2,TF1,TF1)
DL_TFC15	(TF3,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC9	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 632 RB6: No data
2	DL_TFC2, DL_TFC10	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 1272 RB6: No data
3	DL_TFC3, DL_TFC11	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 2552 RB6: No data
4	DL_TFC4 DL_TFC12	UL_TFC2, UL_TFC6	DL_TFC0, DL_TFC8, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC6	RB5: No data RB6: 312	RB5: No data RB6: 312
5	DL_TFC5 DL_TFC13	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC1, DL_TFC4, DL_TFC8, DL_TFC9, DL_TFC12, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 632 RB6: 312
6	DL_TFC6 DL_TFC14	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC2, DL_TFC4, DL_TFC8, DL_TFC10, DL_TFC12, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 1272 RB6: 312
7	DL_TFC7 DL_TFC15	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC3, DL_TFC4, DL_TFC8, DL_TFC11, DL_TFC12, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 2552 RB6: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

See 18.1.1.1 for test procedure.

18.1.2.60.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1: RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB6.
 - for sub-test 2: RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB6.
 - for sub-test 3: RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB6.
 - for sub-test 4: RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 5 - 7 : RLC SDU on RB6 having the same content as sent by SS; RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink.

18.1.2.61 Streaming / unknown / UL:16 DL:128 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.61.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.61.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.64.

18.1.2.61.3 Method of test

Uplink TFS:

	TF	RB5 (16 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

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, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (128 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x656	0x336	0x148
	TF1, bits	1x656	1x336	1x148
	TF2, bits	2x656	N/A	N/A
	TF3, bits	3x656	N/A	N/A
	TF4, bits	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6 DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF2, TF0, TF0)
DL_TFC3	(TF3, TF0, TF0)
DL_TFC4	(TF4, TF1, TF0)
DL_TFC5	(TF0, TF1, TF0)
DL_TFC6	(TF1, TF1, TF0)
DL_TFC7	(TF2, TF1, TF0)
DL_TFC8	(TF3, TF1, TF0)
DL_TFC9	(TF4, TF1, TF0)
DL_TFC10	(TF0, TF0, TF1)
DL_TFC11	(TF1, TF0, TF1)
DL_TFC12	(TF2, TF0, TF1)
DL_TFC13	(TF3, TF0, TF1)
DL_TFC14	(TF4, TF0, TF1)
DL_TFC15	(TF0, TF1, TF1)
DL_TFC16	(TF1, TF1, TF1)
DL_TFC17	(TF2, TF1, TF1)
DL_TFC18	(TF3, TF1, TF1)
DL_TFC19	(TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC9	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 632 RB6: No data
2	DL_TFC2, DL_TFC10	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 1272 RB6: No data
3	DL_TFC3, DL_TFC11	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 1912 RB6: No data
4	DL_TFC4, DL_TFC14	UL_TFC1, UL_TFC5	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: 312 RB6: No data	RB5: 2552 RB6: No data
5	DL_TFC5, DL_TFC15	UL_TFC2, UL_TFC6	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: No data RB6: 312	RB5: No data RB6: 312
6	DL_TFC6, DL_TFC16	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC1, DL_TFC5, DL_TFC10, DL_TFC11, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 632 RB6: 312
7	DL_TFC7, DL_TFC17	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC2, DL_TFC5, DL_TFC10, DL_TFC12, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC7,	RB5: 312 RB6: 312	RB5: 1272 RB6: 312
8	DL_TFC8, DL_TFC18	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC3, DL_TFC5, DL_TFC10, DL_TFC13, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 1912 RB6: 312

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
9	DL_TFC9 DL_TFC19	UL_TFC3, UL_TFC7	DL_TFC0, DL_TFC4, DL_TFC5, DL_TFC10, DL_TFC14, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC4, UL_TFC5, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 312 RB6: 312	RB5: 2552 RB6: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

See 18.1.1.1 for test procedure.

18.1.2.61.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be
 - for sub-test 1-4 : RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB6.
 - for sub-test 5: RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 6 - 9: RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink and RLC SDU on RB6 having the same content as sent by SS.

18.1.2.62 Streaming / unknown / UL:32 DL:256 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.62.1 Conformance requirement

See 18.1.2.4.1.1.

18.1.2.62.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.65 for 20 ms TTI case.

18.1.2.62.3 Method of test

Uplink TFS:

	TF	RB5 (32 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148
	TF2, bits	2x336	N/A	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	(TF0,TF1,TF0)
UL_TFC4	(TF1,TF1,TF0)
UL_TFC5	(TF2,TF1,TF0)
UL_TFC6	(TF0,TF0,TF1)
UL_TFC7	(TF1,TF0,TF1)
UL_TFC8	(TF2,TF0,TF1)
UL_TFC9	(TF0,TF1,TF1)
UL_TFC10	(TF1,TF1,TF1)
UL_TFC11	(TF2,TF1,TF1)

Downlink TFS:

	TF	RB5 (256 kbps TTI 10ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148
	TF2, bits	2x336	N/A	N/A
	TF3, bits	4x336	N/A	N/A
	TF4, bits	8x336	N/A	N/A

Downlink TFCS:

TFCI	(RB5,RB6 DCCH)
DL_TFC0	(TF0, TF0,TF0)
DL_TFC1	(TF1, TF0,TF0)
DL_TFC2	(TF2, TF0,TF0)
DL_TFC3	(TF3,TF0,TF0)
DL_TFC4	(TF4,TF0,TF0)
DL_TFC5	(TF0,TF1,TF0)
DL_TFC6	(TF1,TF1,TF0)
DL_TFC7	(TF2,TF1,TF0)
DL_TFC8	(TF3,TF1,TF0)
DL_TFC9	(TF4,TF1,TF0)
DL_TFC10	(TF0,TF0,TF1)
DL_TFC11	(TF1,TF0,TF1)
DL_TFC12	(TF2,TF0,TF1)
DL_TFC13	(TF3,TF0,TF1)
DL_TFC14	(TF4,TF0,TF1)
DL_TFC15	(TF0,TF1,TF1)
DL_TFC16	(TF1,TF1,TF1)
DL_TFC17	(TF2,TF1,TF1)
DL_TFC18	(TF3,TF1,TF1)
DL_TFC19	(TF4,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC11	UL_TFC1, UL_TFC7	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 312 RB6: No data	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC12	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632 RB6: No data	RB5: 632 RB6: No data
3	DL_TFC3, DL_TFC13	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632 RB6: No data	RB5: 1272 RB6: No data
4	DL_TFC4 DL_TFC14	UL_TFC2, UL_TFC8	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 632 RB6: No data	RB5: 2552 RB6: No data
5	DL_TFC5 DL_TFC15	UL_TFC3, UL_TFC9	DL_TFC0, DL_TFC10, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: No data RB6: 312	RB5: No data RB6: 312
6	DL_TFC6 DL_TFC16	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC1, DL_TFC5, DL_TFC10, DL_TFC11, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 312 RB6: 312	RB5: 312 RB6: 312
7	DL_TFC7 DL_TFC17	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC2, DL_TFC5, DL_TFC10, DL_TFC12, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 312 RB6: 312	RB5: 632 RB6: 312
8	DL_TFC8 DL_TFC18	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC3, DL_TFC5, DL_TFC10, DL_TFC13, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 312 RB6: 312	RB5: 1272 RB6: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
9	DL_TFC9 DL_TFC19	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC4, DL_TFC5, DL_TFC10, DL_TFC14, DL_TFC15, UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 312 RB6: 312	RB5: 2552 RB6: 312
10	DL_TFC9 DL_TFC19	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC4, DL_TFC5, DL_TFC10, DL_TFC14, DL_TFC15, UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 632 RB6: 312	RB5: 2552 RB6: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the uplink TB size.						

See 18.1.1.1 for test procedure.

18.1.2.62.4 Test requirements

See 18.1.1.1 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15 the UE transmitted transport format shall be :
 - for sub-test 1: RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 2-4 : RLC SDUs on RB5 having the content equal to the first 632 bits of the test data sent by the SS in downlink; and no data shall be received on RB6.
 - for sub-test 5: RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 6: RLC SDUs on RB5 having the content equal to the first 632 bits of the test data sent by the SS in downlink; RLC SDU on RB6 having the same content as sent by SS.
 - for sub-test 7-9: RLC SDUs on RB5 having the content equal to the first 312 bits of the test data sent by the SS in downlink;. RLC SDU on RB6 having the same content as sent by SS.
 - for sub-test 10: RLC SDUs on RB5 having the content equal to the first 632 bits of the test data sent by the SS in downlink;. RLC SDU on RB6 having the same content as sent by SS.

18.1.2.63 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:0 DL:0 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.63.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.63.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38a.

18.1.2.63.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	N/A	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC4	(TF1, TF0, TF0, TF0, TF1)
UL_TFC5	(TF2, TF1, TF1, TF0, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (0 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	N/A	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF0, TF1)
DL_TFC4	(TF1, TF0, TF0, TF0, TF1)
DL_TFC5	(TF2, TF1, TF1, TF0, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC4	UL_TFC1, UL_TFC4	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 39 RB6: 103 RB7: 60 RB8: No data	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC5	UL_TFC2, UL_TFC5	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
<p>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). As the TTI for RB8 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size has been set equal to the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

18.1.2.63.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.64 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.64.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.64.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38b.

18.1.2.64.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	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, TF0, TF1)
UL_TFC7	(TF1, TF0, TF0, TF0, TF1)
UL_TFC8	(TF2, TF1, TF1, TF0, TF1)
UL_TFC9	(TF0, TF0, TF0, TF1, TF1)
UL_TFC10	(TF1, TF0, TF0, TF1, TF1)
UL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Downlink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (8 kbps)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF0, TF1)
DL_TFC7	(TF1, TF0, TF0, TF0, TF1)
DL_TFC8	(TF2, TF1, TF1, TF0, TF1)
DL_TFC9	(TF0, TF0, TF0, TF1, TF1)
DL_TFC10	(TF1, TF0, TF0, TF1, TF1)
DL_TFC11	(TF2, TF1, TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC7	UL_TFC1 UL_TFC7	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC8	UL_TFC2 UL_TFC8	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC9	UL_TFC3 UL_TFC9	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC10	UL_TFC4 UL_TFC10	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC11	UL_TFC5 UL_TFC11	DL_TFC0, DL_TFC6, UL_TFC0, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
<p>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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 40 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over four subsequent TTIs, i.e. UL RLC SDU SIZE has been set to four times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).</p>						

18.1.2.64.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub test.
3. At step 15 the UE shall return
 - for sub-test 1: RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3: RLC SDU on RB8 having the same content as sent by SS in the downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4: RLC SDU on RB5, RB8 having the same content as sent by SS and no data shall be received on RB6 and RB7.
 - for sub-test 5: RLC SDU on RB5, RB6, RB7, RB8 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.65 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:32 kbps / PS RAB+ UL:3.4 DL: 3.4 kbps SRBs for DCCH

18.1.2.65.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.65.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38c.

18.1.2.65.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	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)	RB8 (32 kbps)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1 DL_TFC16	UL_TFC1 UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: No data	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2 DL_TFC17	UL_TFC2 UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: No data	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3 DL_TFC18	UL_TFC3 UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC3, UL_TFC15, UL_TFC18	RB5: No data RB6: No data RB7: No data RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4 DL_TFC19	UL_TFC4 UL_TFC19	DL_TFC0, DL_TFC1, DL_TFC3, DL_TFC15, DL_TFC16, DL_TFC18, UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC15, UL_TFC16, UL_TFC18	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: No data RB7: No data RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5 DL_TFC20	UL_TFC5 UL_TFC20	DL_TFC0, DL_TFC2, DL_TFC3, DL_TFC15, DL_TFC17, DL_TFC18, UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC17, UL_TFC18	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC1, DL_TFC6, DL_TFC15, DL_TFC16, DL_TFC21, UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC15, UL_TFC16, UL_TFC21	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC2, DL_TFC6, DL_TFC15, DL_TFC17, DL_TFC21, UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC15, UL_TFC17, UL_TFC21	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632

Sub-test	Downlink TFCs under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24	RB5: No data RB6: No data RB7: No data RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10 , DL_TFC25	UL_TFC10 , UL_TFC25	DL_TFC0, DL_TFC1, DL_TFC9, DL_TFC15, DL_TFC16, DL_TFC24, UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC15, UL_TFC16, UL_TFC24	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: No data RB7: No data RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952
11	DL_TFC11 , DL_TFC26	UL_TFC11 , UL_TFC26	DL_TFC0, DL_TFC2, DL_TFC9, DL_TFC15, DL_TFC17, DL_TFC24, UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC15, UL_TFC17, UL_TFC24	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12 , DL_TFC27	UL_TFC12 , UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27	RB5: No data RB6: No data RB7: No data RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13 , DL_TFC28	UL_TFC13 , UL_TFC28	DL_TFC0, DL_TFC1, DL_TFC12, DL_TFC15, DL_TFC16, DL_TFC27, UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC15, UL_TFC16, UL_TFC27	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14 , DL_TFC29	UL_TFC14 , UL_TFC29	DL_TFC0, DL_TFC2, DL_TFC12, DL_TFC15, DL_TFC17, DL_TFC27, UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC15, UL_TFC17, UL_TFC27	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 40 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over four subsequent TTIs, i.e. UL RLC SDU SIZE has been set to four times the uplink TFS size minus 8 (the size of a 7 bit length indicator and expansion bit).						

18.1.2.65.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub test.
3. At step 15 the UE shall return
 - for sub-test 1: RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB8.
 - for sub-test 2: RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 3, 6, 9 and 12: RLC SDU on RB8 having the same content sent by the SS in the downlink; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 4, 7, 10 and 13: RLC SDU on RB5 ,RB8 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5, 8, 11 and 14: an RLC SDU on RB5, RB6, RB7, RB8 having the same content as sent by SS in the downlink.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.66 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:128 DL:128 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.66.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.66.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.66.

18.1.2.66.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

		RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

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)	RB8 (128 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note1)	UL RLC SDU size (bits) Note 2	Test data size (bits) Note 2
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, DL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632

9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: No data RB6: No data RB7: No data RB8: 952
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952	RB5: 39 RB6: No data RB7: No data RB8: 952
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
NOTE1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCs						
NOTE2: 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

18.1.2.66.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

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

2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8 or RB9.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8 or RB9.
 - for sub-test 3, 6, 9 and 12: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6, RB7 or RB9.
 - for sub-test 4, 7, 10 and 13: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6, RB7 or RB9.
 - for sub-test 5, 8, 11 and 14: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS. No data shall be received on RB9.
 - for sub-test 15: RLC SDUs on RB5, RB6, RB7 and RB9 having the same content as sent by SS; and no data shall be received on RB8.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.67 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + Interactive or background / UL:64 DL:64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.67.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.67.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.38d.

18.1.2.67.3 Method of test

See 18.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 + RB9 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x340	0x148
	TF1, bits	1x39	1x103	1x60	1x340	1x148
	TF2, bits	1x81	N/A	N/A	2x340	N/A
	TF3, bits	N/A	N/A	N/A	3x340	N/A
	TF4, bits	N/A	N/A	N/A	4x340	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8+RB9, 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)	RB8 + RB9 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	1x0	0x103	0x60	0x340	0x148
	TF1, bits	1x39	1x103	1x60	1x340	1x148
	TF2, bits	1x81	N/A	N/A	2x340	N/A
	TF3, bits	N/A	N/A	N/A	3x340	N/A
	TF4, bits	N/A	N/A	N/A	4x340	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8+RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note1)	UL RLC SDU size (bits) Note 2	Test data size (bits) Note 2
1	DL_TFC1, DL_TFC16	UL_TFC1, UL_TFC16	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC16	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC17	UL_TFC2, UL_TFC17	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC18	UL_TFC3, UL_TFC18	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC15, UL_TFC18	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
4	DL_TFC4, DL_TFC19	UL_TFC4, UL_TFC19	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
5	DL_TFC5, DL_TFC20	UL_TFC5, UL_TFC20	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
6	DL_TFC6, DL_TFC21	UL_TFC6, UL_TFC21	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC15, UL_TFC21	RB5: 39 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: No data
7	DL_TFC7, DL_TFC22	UL_TFC7, UL_TFC22	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22	RB5: 39 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: No data
8	DL_TFC8, DL_TFC23	UL_TFC8, UL_TFC23	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data

9	DL_TFC9, DL_TFC24	UL_TFC9, UL_TFC24	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC15, UL_TFC24	RB5: 39 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: No data RB6: No data RB7: No data RB8: 952 RB9: No data
10	DL_TFC10, DL_TFC25	UL_TFC10, UL_TFC25	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25	RB5: 39 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: 39 RB6: No data RB7: No data RB8: 952 RB9: No data
11	DL_TFC11, DL_TFC26	UL_TFC11, UL_TFC26	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: No data
12	DL_TFC12, DL_TFC27	UL_TFC12, UL_TFC27	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC15, UL_TFC27	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: No data
13	DL_TFC13, DL_TFC28	UL_TFC13, UL_TFC28	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data
14	DL_TFC14, DL_TFC29	UL_TFC14, UL_TFC29	DL_TFC0, DL_TFC15, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 1272

NOTE1: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs
 NOTE2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs.
 RB8 and RB9: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).

18.1.2.67.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8 or RB9.
 - for sub-test 2: RLC SDUs on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8 or RB9.
 - for sub-test 3, 6, 9 and 12: RLC SDUs on RB8 having the same content as sent by SS; and no data shall be received on RB5, RB6, RB7 or RB9.
 - for sub-test 4, 7, 10 and 13: RLC SDUs on RB5 and RB8 having the same content as sent by SS; and no data shall be received on RB6, RB7 or RB9.
 - for sub-test 5, 8, 11 and 14: RLC SDUs on RB5, RB6, RB7 and RB8 having the same content as sent by SS; no data shall be received on RB9.
 - for sub-test 15: RLC SDUs on RB5, RB6, RB7 and RB9 having the same content as sent by SS; and no data shall be received on RB8.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message

18.1.2.68 Conversational / unknown / UL:64 DL:64 kbps / CS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.68.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.68.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.51a for the 20 ms TTI case.

18.1.2.68.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 8 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148

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, TF0, TF1)
UL_TFC5	(TF1, TF0, TF1)
UL_TFC6	(TF0, TF1, TF1)
UL_TFC7	(TF1, TF1, TF1)

Downlink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (I/B 8 kbps)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148

Downlink TFCS:

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

TFCI	(RB5, RB6, DCCH)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCIs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC5	UL_TFC1, DL_TFC5	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5	RB5: No data RB6: 312	RB5: No data RB6: 312
2	DL_TFC2, DL_TFC6	UL_TFC2, DL_TFC6	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 2x640 RB6: No data	RB5: 2x640 RB6: No data
3	DL_TFC3, DL_TFC7	UL_TFC3, DL_TFC7	DL_TFC0, DL_TFC4, UL_TFC0, UL_TFC4	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC5, UL_TFC6, UL_TFC7	RB5: 2x640 RB6: 312	RB5: 2x640 RB6: 312
NOTE: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB6: Test data size has been set to DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the TTI for RB5 and RB6 is the same for both downlink and uplink then UL RLC SDU size has been set to achieve UE to return one SDU per TTI, i.e. the UL RLC SDU size for RB6 has been set equal to the uplink TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit).and .the UL RLC SDU size for RB5 has been set equal to the uplink TFS size under test.						

18.1.2.68.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB6 having the same content as sent by SS; and no data shall be received on RB5.
 - for sub-test 2: two RLC SDUs on RB5 having the same content as sent by SS; and no data shall be received on RB6.
 - for sub-test 3: two RLC SDUs on RB5 and one RLC SDU on RB6 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.69 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:16 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.69.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.69.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.67.

18.1.2.69.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RA B subf low #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (16bps, 20 ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
UL_TFC0	(TF0,TF0,TF0,TF0,TF0,TF0)
UL_TFC1	(TF1,TF0,TF0,TF0,TF0,TF0)
UL_TFC2	(TF2,TF1,TF1,TF0,TF0,TF0)
UL_TFC3	(TF0,TF0,TF0,TF1,TF0,TF0)
UL_TFC4	(TF1,TF0,TF0,TF1,TF0,TF0)
UL_TFC5	(TF2,TF1,TF1,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF0,TF1,TF0)
UL_TFC8	(TF2,TF1,TF1,TF0,TF1,TF0)
UL_TFC9	(TF0,TF0,TF0,TF1,TF1,TF0)
UL_TFC10	(TF1,TF0,TF0,TF1,TF1,TF0)
UL_TFC11	(TF2,TF1,TF1,TF1,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF0,TF0,TF1)
UL_TFC13	(TF1,TF0,TF0,TF0,TF0,TF1)
UL_TFC14	(TF2,TF1,TF1,TF0,TF0,TF1)
UL_TFC15	(TF0,TF0,TF0,TF1,TF0,TF1)
UL_TFC16	(TF1,TF0,TF0,TF1,TF0,TF1)
UL_TFC17	(TF2,TF1,TF1,TF1,TF0,TF1)
UL_TFC18	(TF0,TF0,TF0,TF0,TF1,TF1)
UL_TFC19	(TF1,TF0,TF0,TF0,TF1,TF1)
UL_TFC20	(TF2,TF1,TF1,TF0,TF1,TF1)
UL_TFC21	(TF0,TF0,TF0,TF1,TF1,TF1)
UL_TFC22	(TF1,TF0,TF0,TF1,TF1,TF1)
UL_TFC23	(TF2,TF1,TF1,TF1,TF1,TF1)

Downlink TFS:

	TFI	RB5 (RA B subf low #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64s, 40ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x656	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A	N/A
	TF3, bits	N/A	N/A	N/A	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
DL_TFC12	(TF0, TF0, TF0, TF0, TF1, TF0)
DL_TFC13	(TF1, TF0, TF0, TF0, TF1, TF0)
DL_TFC14	(TF2, TF1, TF1, TF0, TF1, TF0)
DL_TFC15	(TF0, TF0, TF0, TF1, TF1, TF0)
DL_TFC16	(TF1, TF0, TF0, TF1, TF1, TF0)
DL_TFC17	(TF2, TF1, TF1, TF1, TF1, TF0)
DL_TFC18	(TF0, TF0, TF0, TF2, TF1, TF0)
DL_TFC19	(TF1, TF0, TF0, TF2, TF1, TF0)
DL_TFC20	(TF2, TF1, TF1, TF2, TF1, TF0)
DL_TFC21	(TF0, TF0, TF0, TF3, TF1, TF0)
DL_TFC22	(TF1, TF0, TF0, TF3, TF1, TF0)
DL_TFC23	(TF2, TF1, TF1, TF3, TF1, TF0)
DL_TFC24	(TF0, TF0, TF0, TF0, TF0, TF1)
DL_TFC25	(TF1, TF0, TF0, TF0, TF0, TF1)
DL_TFC26	(TF2, TF1, TF1, TF0, TF0, TF1)
DL_TFC27	(TF0, TF0, TF0, TF1, TF0, TF1)
DL_TFC28	(TF1, TF0, TF0, TF1, TF0, TF1)
DL_TFC29	(TF2, TF1, TF1, TF1, TF0, TF1)
DL_TFC30	(TF0, TF0, TF0, TF2, TF0, TF1)
DL_TFC31	(TF1, TF0, TF0, TF2, TF0, TF1)
DL_TFC32	(TF2, TF1, TF1, TF2, TF0, TF1)
DL_TFC33	(TF0, TF0, TF0, TF3, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF3, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF3, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF0, TF1, TF1)
DL_TFC37	(TF1, TF0, TF0, TF0, TF1, TF1)
DL_TFC38	(TF2, TF1, TF1, TF0, TF1, TF1)
DL_TFC39	(TF0, TF0, TF0, TF1, TF1, TF1)
DL_TFC40	(TF1, TF0, TF0, TF1, TF1, TF1)
DL_TFC41	(TF2, TF1, TF1, TF1, TF1, TF1)
DL_TFC42	(TF0, TF0, TF0, TF2, TF1, TF1)
DL_TFC43	(TF1, TF0, TF0, TF2, TF1, TF1)
DL_TFC44	(TF2, TF1, TF1, TF2, TF1, TF1)
DL_TFC45	(TF0, TF0, TF0, TF3, TF1, TF1)
DL_TFC46	(TF1, TF0, TF0, TF3, TF1, TF1)
DL_TFC47	(TF2, TF1, TF1, TF3, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC25	UL_TFC1, UL_TFC13	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13	RB5: 39 RB6: No data RB7: No data RB8: No data RB8: No data RB8: No data	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC26	UL_TFC2, UL_TFC14	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB8: No data	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC27	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: No data
4	DL_TFC4, DL_TFC28	UL_TFC4, UL_TFC16	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: No data
5	DL_TFC5, DL_TFC29	UL_TFC5, UL_TFC17	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data
6	DL_TFC6, DL_TFC30	UL_TFC6, UL_TFC18	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: No data
7	DL_TFC7, DL_TFC31	UL_TFC7, UL_TFC19	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
8	DL_TFC8, DL_TFC32	UL_TFC8, UL_TFC20	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data
9	DL_TFC9, DL_TFC33	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: No data
10	DL_TFC10, DL_TFC34	UL_TFC10 UL_TFC22	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: 312
11	DL_TFC11, DL_TFC35	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: No data
12	DL_TFC12, DL_TFC36	UL_TFC6, UL_TFC18	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC6, UL_TFC12, UL_TFC18	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312
13	DL_TFC13, DL_TFC37	UL_TFC7, UL_TFC19	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC12, UL_TFC13, UL_TFC18, UL_TFC19	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312
14	DL_TFC14, DL_TFC38	UL_TFC8, UL_TFC20	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC12, UL_TFC14, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
15	DL_TFC15, DL_TFC39	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9, UL_TFC12, UL_TFC15, UL_TFC18, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312
16	DL_TFC16, DL_TFC40	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: 312
17	DL_TFC17, DL_TFC41	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 312
18	DL_TFC18, DL_TFC42	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9, UL_TFC12, UL_TFC15, UL_TFC18, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: 312
19	DL_TFC19, DL_TFC43	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC44	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 312
21	DL_TFC21, DL_TFC45	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9 UL_TFC12, UL_TFC15, UL_TFC18, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: 312
22	DL_TFC22, DL_TFC46	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10 UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: 312
23	DL_TFC23, DL_TFC47	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11 UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: 312
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 20 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.69.4 Test requirements

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8 and RB9.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8 and RB9.
 - for sub-test 3, 6, 9: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS in downlink; and no data shall be received on RB5, RB6, RB7 and RB9.
 - for sub-test 4, 7, 10: an RLC SDU on RB5 having the same content of the test data sent by the SS in downlink; and no data shall be received on RB6, RB7 and RB9; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.
 - for sub-test 5, 8, 11: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS; and no data shall be received on RB9; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.
 - for sub-test 12: an RLC SDU on RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6, RB7, RB8.
 - for sub-test 13: an RLC SDU on RB5 and RB9 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8.
 - for sub-test 14: an RLC SDU on RB5, RB6, RB7 and RB9 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 15, 18, 21: an RLC SDU on RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.
 - for sub-test 16, 19, 22: an RLC SDU on RB5 and RB9 having the same content as sent by SS; and no data shall be received on RB6 and RB7; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.
 - for sub-test 17, 20, 23: an RLC SDU on RB5, RB6, RB7 and RB9 having the same content as sent by SS; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.70 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:16 DL:128 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.70.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.70.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.68.

18.1.2.70.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (16 kbps, 20ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	N/A	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
UL_TFC0	(TF0,TF0,TF0,TF0,TF0,TF0)
UL_TFC1	(TF1,TF0,TF0,TF0,TF0,TF0)
UL_TFC2	(TF2,TF1,TF1,TF0,TF0,TF0)
UL_TFC3	(TF0,TF0,TF0,TF1,TF0,TF0)
UL_TFC4	(TF1,TF0,TF0,TF1,TF0,TF0)
UL_TFC5	(TF2,TF1,TF1,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF0,TF1,TF0)
UL_TFC7	(TF1,TF0,TF0,TF0,TF1,TF0)
UL_TFC8	(TF2,TF1,TF1,TF0,TF1,TF0)
UL_TFC9	(TF0,TF0,TF0,TF1,TF1,TF0)
UL_TFC10	(TF1,TF0,TF0,TF1,TF1,TF0)
UL_TFC11	(TF2,TF1,TF1,TF1,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF0,TF0,TF1)
UL_TFC13	(TF1,TF0,TF0,TF0,TF0,TF1)
UL_TFC14	(TF2,TF1,TF1,TF0,TF0,TF1)
UL_TFC15	(TF0,TF0,TF0,TF1,TF0,TF1)
UL_TFC16	(TF1,TF0,TF0,TF1,TF0,TF1)
UL_TFC17	(TF2,TF1,TF1,TF1,TF0,TF1)
UL_TFC18	(TF0,TF0,TF0,TF0,TF1,TF1)
UL_TFC19	(TF1,TF0,TF0,TF0,TF1,TF1)
UL_TFC20	(TF2,TF1,TF1,TF0,TF1,TF1)
UL_TFC21	(TF0,TF0,TF0,TF1,TF1,TF1)
UL_TFC22	(TF1,TF0,TF0,TF1,TF1,TF1)
UL_TFC23	(TF2,TF1,TF1,TF1,TF1,TF1)

Downlink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps s, 20ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3, bits	N/A	N/A	N/A	4x336	N/A	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1, TF0)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1, TF0)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1, TF0)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1, TF0)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1, TF0)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1, TF0)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1, TF0)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1, TF0)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1, TF0)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1, TF0)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1, TF0)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1, TF0)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1, TF0)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1, TF0)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1, TF0)
DL_TFC30	(TF0, TF0, TF0, TF0, TF0, TF1)
DL_TFC31	(TF1, TF0, TF0, TF0, TF0, TF1)
DL_TFC32	(TF2, TF1, TF1, TF0, TF0, TF1)
DL_TFC33	(TF0, TF0, TF0, TF1, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF1, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF1, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF2, TF0, TF1)
DL_TFC37	(TF1, TF0, TF0, TF2, TF0, TF1)
DL_TFC38	(TF2, TF1, TF1, TF2, TF0, TF1)
DL_TFC39	(TF0, TF0, TF0, TF3, TF0, TF1)
DL_TFC40	(TF1, TF0, TF0, TF3, TF0, TF1)
DL_TFC41	(TF2, TF1, TF1, TF3, TF0, TF1)
DL_TFC42	(TF0, TF0, TF0, TF4, TF0, TF1)
DL_TFC43	(TF1, TF0, TF0, TF4, TF0, TF1)
DL_TFC44	(TF2, TF1, TF1, TF4, TF0, TF1)
DL_TFC45	(TF0, TF0, TF0, TF0, TF1, TF1)
DL_TFC46	(TF1, TF0, TF0, TF0, TF1, TF1)
DL_TFC47	(TF2, TF1, TF1, TF0, TF1, TF1)
DL_TFC48	(TF0, TF0, TF0, TF1, TF1, TF1)
DL_TFC49	(TF1, TF0, TF0, TF1, TF1, TF1)
DL_TFC50	(TF2, TF1, TF1, TF1, TF1, TF1)
DL_TFC51	(TF0, TF0, TF0, TF2, TF1, TF1)
DL_TFC52	(TF1, TF0, TF0, TF2, TF1, TF1)
DL_TFC53	(TF2, TF1, TF1, TF2, TF1, TF1)
DL_TFC54	(TF0, TF0, TF0, TF3, TF1, TF1)
DL_TFC55	(TF1, TF0, TF0, TF3, TF1, TF1)
DL_TFC56	(TF2, TF1, TF1, TF3, TF1, TF1)
DL_TFC57	(TF0, TF0, TF0, TF4, TF1, TF1)
DL_TFC58	(TF1, TF0, TF0, TF4, TF1, TF1)
DL_TFC59	(TF2, TF1, TF1, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC31	UL_TFC1 UL_TFC13	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13	RB5: 39 RB6: No data RB7: No data RB8: No data RB8: No data RB8: No data	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC32	UL_TFC2, UL_TFC14	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB8: No data	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC33	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
4	DL_TFC4, DL_TFC34	UL_TFC4, UL_TFC16	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
5	DL_TFC5, DL_TFC35	UL_TFC5 UL_TFC17	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12 UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
6	DL_TFC6, DL_TFC36	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: No data
7	DL_TFC7, DL_TFC37	UL_TFC4, UL_TFC16	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: No data

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
8	DL_TFC8, DL_TFC38	UL_TFC5, UL_TFC17	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data
9	DL_TFC9, DL_TFC39	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 952 RB9: No data
10	DL_TFC10, DL_TFC40	UL_TFC4 UL_TFC16	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 952 RB9: No data
11	DL_TFC11, DL_TFC41	UL_TFC5, UL_TFC17	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: No data
12	DL_TFC12, DL_TFC42	UL_TFC3, UL_TFC15	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC12, UL_TFC15	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: No data
13	DL_TFC13, DL_TFC43	UL_TFC4, UL_TFC16	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data
14	DL_TFC14, DL_TFC44	UL_TFC5, UL_TFC17	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
15	DL_TFC15, DL_TFC45	UL_TFC6, UL_TFC18	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC6, UL_TFC12, UL_TFC18	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312
16	DL_TFC16, DL_TFC46	UL_TFC7, UL_TFC19	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC12, UL_TFC13, UL_TFC18, UL_TFC19	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312
17	DL_TFC17, DL_TFC47	UL_TFC8, UL_TFC20	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC12, UL_TFC14, UL_TFC18, UL_TFC20	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312
18	DL_TFC18, DL_TFC48	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC3, UL_TFC6, UL_TFC9, UL_TFC12, UL_TFC15, UL_TFC18, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312
19	DL_TFC19, DL_TFC49	UL_TFC10, UL_TFC22	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC50	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
21	DL_TFC21, DL_TFC51	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC9, UL_TFC12, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312
22	DL_TFC22, DL_TFC52	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: 312
23	DL_TFC23, DL_TFC53	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 312
24	DL_TFC24, DL_TFC54	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC9, UL_TFC12, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 952 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
25	DL_TFC25, DL_TFC55	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10 UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 952 RB9: 312
26	DL_TFC26, DL_TFC56	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11 UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: 312
27	DL_TFC27, DL_TFC57	UL_TFC9, UL_TFC21	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC9 UL_TFC12, UL_TFC21	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: 312
28	DL_TFC28, DL_TFC58	UL_TFC10 , UL_TFC22	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC6, UL_TFC7, UL_TFC9, UL_TFC10 UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC18, UL_TFC19, UL_TFC21, UL_TFC22	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
29	DL_TFC29, DL_TFC59	UL_TFC11 , UL_TFC23	DL_TFC0, DL_TFC30, UL_TFC0, UL_TFC12	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC5, UL_TFC6, UL_TFC8, UL_TFC9, UL_TFC11 UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC18, UL_TFC20, UL_TFC21, UL_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 312
<p>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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 20 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).</p>						

18.1.2.70.4 Test requirements

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7 RB8 and RB9.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8 and RB9.
 - for sub-test 3: an RLC SDU on RB8 he same content of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6, RB7 and RB9.
 - for sub-test 4: an RLC SDU on RB8 having the same content of the test data sent by the SS in downlink; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS; and no data shall be received on RB9.
 - for sub-test 6, 9, 12: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by the SS in downlink; and no data shall be received on RB5, RB6, RB7 and RB9.
 - for sub-test 7, 10, 13: an RLC SDU on RB5 having the content equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS; and no data shall be received on RB6, RB7 and RB9.
 - for sub-test 8, 11, 14: an RLC SDU on RB5, RB6, RB7 having the same content as sent by SS; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS; no data shall be received on RB9.
 - for sub-test 15: an RLC SDU on RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6, RB7 and RB8.

- for sub-test 16: an RLC SDU on RB5 and RB9 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8.
- for sub-test 17: an RLC SDU on RB5, RB6, RB7 and RB9 having the same content as sent by SS; and no data shall be received on RB8.
- for sub-test 18: an RLC SDU on RB8 and RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 19: an RLC SDU on RB5, RB8 and RB9 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 20: an RLC SDU on RB5, RB6, RB7, RB8 and RB9 having the same content as sent by SS.
- for sub-test 21, 24, 27: an RLC SDU on RB9 having the same content as sent by SS; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS; and no data shall be received on RB5, RB6 and RB7.
- for sub-test 22, 25, 28: an RLC SDU on RB5 and RB9 having the same content as sent by SS; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS; and no data shall be received on RB6 and RB7.
- for sub-test 23, 26, 29: an RLC SDU on RB5, RB6, RB7 and RB9 having the same content as sent by SS; an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS.

4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.2.71 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / unknown / UL:128 DL:64 kbps / PS RAB + Interactive or background / UL:8 DL:8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.2.71.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.71.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.69.

18.1.2.71.3 Method of test

See 18.1.1.2 for test procedure.

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (128 kbps s, 20ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3, bits	N/A	N/A	N/A	4x336	N/A	N/A
	TF4, bits	N/A	N/A	N/A	8x336	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1, TF0)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1, TF0)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1, TF0)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1, TF0)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1, TF0)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1, TF0)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1, TF0)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1, TF0)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1, TF0)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1, TF0)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1, TF0)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1, TF0)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1, TF0)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1, TF0)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1, TF0)
UL_TFC30	(TF0, TF0, TF0, TF0, TF0, TF1)
UL_TFC31	(TF1, TF0, TF0, TF0, TF0, TF1)
UL_TFC32	(TF2, TF1, TF1, TF0, TF0, TF1)
UL_TFC33	(TF0, TF0, TF0, TF1, TF0, TF1)
UL_TFC34	(TF1, TF0, TF0, TF1, TF0, TF1)
UL_TFC35	(TF2, TF1, TF1, TF1, TF0, TF1)
UL_TFC36	(TF0, TF0, TF0, TF2, TF0, TF1)
UL_TFC37	(TF1, TF0, TF0, TF2, TF0, TF1)
UL_TFC38	(TF2, TF1, TF1, TF2, TF0, TF1)
UL_TFC39	(TF0, TF0, TF0, TF3, TF0, TF1)
UL_TFC40	(TF1, TF0, TF0, TF3, TF0, TF1)
UL_TFC41	(TF2, TF1, TF1, TF3, TF0, TF1)
UL_TFC42	(TF0, TF0, TF0, TF4, TF0, TF1)
UL_TFC43	(TF1, TF0, TF0, TF4, TF0, TF1)
UL_TFC44	(TF2, TF1, TF1, TF4, TF0, TF1)
UL_TFC45	(TF0, TF0, TF0, TF0, TF1, TF1)
UL_TFC46	(TF1, TF0, TF0, TF0, TF1, TF1)
UL_TFC47	(TF2, TF1, TF1, TF0, TF1, TF1)
UL_TFC48	(TF0, TF0, TF0, TF1, TF1, TF1)
UL_TFC49	(TF1, TF0, TF0, TF1, TF1, TF1)
UL_TFC50	(TF2, TF1, TF1, TF1, TF1, TF1)
UL_TFC51	(TF0, TF0, TF0, TF2, TF1, TF1)
UL_TFC52	(TF1, TF0, TF0, TF2, TF1, TF1)
UL_TFC53	(TF2, TF1, TF1, TF2, TF1, TF1)
UL_TFC54	(TF0, TF0, TF0, TF3, TF1, TF1)
UL_TFC55	(TF1, TF0, TF0, TF3, TF1, TF1)
UL_TFC56	(TF2, TF1, TF1, TF3, TF1, TF1)
UL_TFC57	(TF0, TF0, TF0, TF4, TF1, TF1)
UL_TFC58	(TF1, TF0, TF0, TF4, TF1, TF1)
UL_TFC59	(TF2, TF1, TF1, TF4, TF1, TF1)

Downlink TFS:

	TFI	RB5 (RA B subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps s, 40ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x656	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x656	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x656	N/A	N/A
	TF3,its	N/A	N/A	N/A	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
DL_TFC12	(TF0, TF0, TF0, TF0, TF1, TF0)
DL_TFC13	(TF1, TF0, TF0, TF0, TF1, TF0)
DL_TFC14	(TF2, TF1, TF1, TF0, TF1, TF0)
DL_TFC15	(TF0, TF0, TF0, TF1, TF1, TF0)
DL_TFC16	(TF1, TF0, TF0, TF1, TF1, TF0)
DL_TFC17	(TF2, TF1, TF1, TF1, TF1, TF0)
DL_TFC18	(TF0, TF0, TF0, TF2, TF1, TF0)
DL_TFC19	(TF1, TF0, TF0, TF2, TF1, TF0)
DL_TFC20	(TF2, TF1, TF1, TF2, TF1, TF0)
DL_TFC21	(TF0, TF0, TF0, TF3, TF1, TF0)
DL_TFC22	(TF1, TF0, TF0, TF3, TF1, TF0)
DL_TFC23	(TF2, TF1, TF1, TF3, TF1, TF0)
DL_TFC24	(TF0, TF0, TF0, TF0, TF0, TF1)
DL_TFC25	(TF1, TF0, TF0, TF0, TF0, TF1)
DL_TFC26	(TF2, TF1, TF1, TF0, TF0, TF1)
DL_TFC27	(TF0, TF0, TF0, TF1, TF0, TF1)
DL_TFC28	(TF1, TF0, TF0, TF1, TF0, TF1)
DL_TFC29	(TF2, TF1, TF1, TF1, TF0, TF1)
DL_TFC30	(TF0, TF0, TF0, TF2, TF0, TF1)
DL_TFC31	(TF1, TF0, TF0, TF2, TF0, TF1)
DL_TFC32	(TF2, TF1, TF1, TF2, TF0, TF1)
DL_TFC33	(TF0, TF0, TF0, TF3, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF3, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF3, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF0, TF1, TF1)
DL_TFC37	(TF1, TF0, TF0, TF0, TF1, TF1)
DL_TFC38	(TF2, TF1, TF1, TF0, TF1, TF1)
DL_TFC39	(TF0, TF0, TF0, TF1, TF1, TF1)
DL_TFC40	(TF1, TF0, TF0, TF1, TF1, TF1)
DL_TFC41	(TF2, TF1, TF1, TF1, TF1, TF1)
DL_TFC42	(TF0, TF0, TF0, TF2, TF1, TF1)
DL_TFC43	(TF1, TF0, TF0, TF2, TF1, TF1)
DL_TFC44	(TF2, TF1, TF1, TF2, TF1, TF1)
DL_TFC45	(TF0, TF0, TF0, TF3, TF1, TF1)
DL_TFC46	(TF1, TF0, TF0, TF3, TF1, TF1)
DL_TFC47	(TF2, TF1, TF1, TF3, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
1	DL_TFC1, DL_TFC25	UL_TFC1, UL_TFC31	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC30, UL_TFC31	RB5: 39 RB6: 103 RB7: 60 RB8: No data RB8: no data	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC26	UL_TFC2, UL_TFC32	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC30, UL_TFC32	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB8: No data	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC27	UL_TFC3, UL_TFC33	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC3, UL_TFC30, UL_TFC33	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: No data
4	DL_TFC4, DL_TFC28	UL_TFC4, UL_TFC34	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4, UL_TFC30, UL_TFC31, UL_TFC33, UL_TFC34	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: No data
5	DL_TFC5, DL_TFC29	UL_TFC8 UL_TFC38	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC30, UL_TFC32, UL_TFC36, UL_TFC38	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data
6	DL_TFC6, DL_TFC30	UL_TFC9, UL_TFC39	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC9, UL_TFC30, UL_TFC39	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: No data
7	DL_TFC7, DL_TFC31	UL_TFC10 , UL_TFC40	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC30, UL_TFC31, UL_TFC39, UL_TFC40	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data
8	DL_TFC8, DL_TFC32	UL_TFC11 , UL_TFC41	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC30, UL_TFC32, UL_TFC39, UL_TFC41	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
9	DL_TFC9, DL_TFC33	UL_TFC12 , UL_TFC42	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC12, UL_TFC30, UL_TFC42	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: No data	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: No data
10	DL_TFC10, DL_TFC34	UL_TFC13 UL_TFC43	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC30, UL_TFC31, UL_TFC42, UL_TFC43	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: No data	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: No data
11	DL_TFC11, DL_TFC35	UL_TFC14 , UL_TFC44	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC30, UL_TFC32, UL_TFC42, UL_TFC44	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: No data	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: No data
12	DL_TFC12, DL_TFC36	UL_TFC15 , UL_TFC45	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC15, UL_TFC30, UL_TFC45	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312
13	DL_TFC13, DL_TFC37	UL_TFC16 , UL_TFC46	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC15, UL_TFC16, UL_TFC30, UL_TFC31, UL_TFC45, UL_TFC46	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312
14	DL_TFC14, DL_TFC38	UL_TFC17 , UL_TFC47	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC15, UL_TFC17, UL_TFC30, UL_TFC32, UL_TFC45, UL_TFC47	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312
15	DL_TFC15, DL_TFC39	UL_TFC21 , UL_TFC51	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC6, UL_TFC15, UL_TFC21, UL_TFC30, UL_TFC36, UL_TFC45, UL_TFC51	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
16	DL_TFC16, DL_TFC40	UL_TFC22 , UL_TFC52	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC6, UL_TFC7, UL_TFC15, UL_TFC16, UL_TFC21, UL_TFC22, UL_TFC30, UL_TFC31, UL_TFC36, UL_TFC37, UL_TFC45, UL_TFC46, UL_TFC51, UL_TFC52	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: 312
17	DL_TFC17, DL_TFC41	UL_TFC23 , UL_TFC53	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC6, UL_TFC8, UL_TFC15, UL_TFC17, UL_TFC21, UL_TFC23, UL_TFC30, UL_TFC32, UL_TFC36, UL_TFC38, UL_TFC45, UL_TFC47, UL_TFC51, UL_TFC53	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 312
18	DL_TFC18, DL_TFC42	UL_TFC24 , UL_TFC54	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC9, UL_TFC15, UL_TFC24, UL_TFC30, UL_TFC39, UL_TFC45, UL_TFC54	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: 312
19	DL_TFC19, DL_TFC43	UL_TFC25 , UL_TFC55	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC9, UL_TFC10, UL_TFC15, UL_TFC16, UL_TFC24, UL_TFC25, UL_TFC30, UL_TFC31, UL_TFC39, UL_TFC40, UL_TFC45, UL_TFC46, UL_TFC54, UL_TFC55	RB5: 39 RB6: No data RB7: no data RB8: 1272 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: 312

Sub-test	Downlink TFCs Under Test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (bits) (note)	Test data size (bits) (note)
20	DL_TFC20, DL_TFC44	UL_TFC26 , UL_TFC56	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC9, UL_TFC11, UL_TFC15, UL_TFC17, UL_TFC24, UL_TFC26, UL_TFC30, UL_TFC32, UL_TFC39, UL_TFC41, UL_TFC45, UL_TFC47, UL_TFC54, UL_TFC56	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 312
21	DL_TFC21, DL_TFC45	UL_TFC27 , UL_TFC57	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC12, UL_TFC15, UL_TFC27, UL_TFC30, UL_TFC42, UL_TFC45, UL_TFC57	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 2552 RB9: 312
22	DL_TFC22, DL_TFC46	UL_TFC28 , UL_TFC58	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC1, UL_TFC12, UL_TFC13, UL_TFC15, UL_TFC16, UL_TFC27, UL_TFC28, UL_TFC30, UL_TFC31, UL_TFC42, UL_TFC43, UL_TFC45, UL_TFC46, UL_TFC57, UL_TFC58	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 2552 RB9: 312
23	DL_TFC23, DL_TFC47	UL_TFC29 , UL_TFC59	DL_TFC0, DL_TFC24, UL_TFC0, UL_TFC30	UL_TFC0, UL_TFC2, UL_TFC12, UL_TFC14, UL_TFC15, UL_TFC17, UL_TFC27, UL_TFC29, UL_TFC30, UL_TFC32, UL_TFC42, UL_TFC44, UL_TFC45, UL_TFC47, UL_TFC57, UL_TFC59	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 2552 RB9: 312
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 DL TFS size under test minus 8 bits (size of 7 bit length indicator and expansion bit). As the uplink TTI for RB8 is 10 ms while the downlink TTI is 20 ms then, to achieve continuous data transmission in uplink the size of the uplink RLC SDU has been set such that it will be transmitted over two subsequent TTIs, i.e. UL RLC SDU SIZE has been set to two times the uplink TFS size minus 8 bits (size of 7 bit length indicator and expansion bit).					

18.1.2.71.4 Test requirements

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCIs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1: an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8 and RB9.
 - for sub-test 2: an RLC SDU on RB5, RB6 and RB7 having the same content as sent by SS; and no data shall be received on RB8 and RB9.
 - for sub-test 3: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS in downlink; and no data shall be received on RB5, RB6, RB7 and RB9.
 - for sub-test 4: an RLC SDU on RB8 having the content equal to the first 312 bits of the test data sent by sent by SS; an RLC SDU on RB5 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 5, 8, 11: an RLC SDU on RB5, RB6, RB7 and RB8 having the same content as sent by SS; and no data shall be received on RB9.
 - for sub-test 6, 9: an RLC SDU on RB8 having the same content as sent by SS in downlink; and no data shall be received on RB5, RB6, RB7 and RB9.
 - for sub-test 7, 10: an RLC SDU on RB5 having the content equal to the content of the test data sent by the SS in downlink; an RLC SDU on RB8 having the same content as sent by SS; and no data shall be received on RB6, RB7 and RB9.
 - for sub-test 12: an RLC SDU on RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6, RB7, RB8 .
 - for sub-test 13: an RLC SDU on RB5 and RB9 having the same content as sent by SS; and no data shall be received on RB6, RB7, RB8.
 - for sub-test 14: an RLC SDU on RB5, RB6, RB7 and RB9 having the same content as sent by SS; and no data shall be received on RB8.
 - for sub-test 15, 18, 21: an RLC SDU on RB8 and RB9 having the same content as sent by SS; and no data shall be received on RB5, RB6 and RB7.
 - for sub-test 16, 19, 22: an RLC SDU on RB5, RB8 and RB9 having the same content as sent by SS; and no data shall be received on RB6 and RB7.
 - for sub-test 17, 20, 23: an RLC SDU on RB5, RB6, RB7, RB8 and RB9 having the same content as sent by SS.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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

18.1.2.72.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.72.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.57.

18.1.2.72.3 Method of test

See 18.1.1.2 for test procedure. However, in this test the RM attribute values used shall be derived separately in the UL and DL as the mid-values of the RM attribute value ranges as specified by the reference radio bearer configuration.

Specific Message Content:

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	4
- 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

Information Element	Value/remark
- RLC size index	Reference to TS34.108 clause 6 Parameter Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- 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	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	22
- PDCP info	Not Present
- CHOICE RLC info type	RLC info
- CHOICE Uplink RLC mode	AMRLC
- 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	4
- Last transmission PDU poll	TRUE
- Last retransmission PDU poll	TRUE
- Poll_Windows	99
- Timer_poll_periodic	Not Present
- CHOICE Downlink RLC mode	AMRLC
- 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	8
- 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	8
- 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	8
- CHOICE RLC size list	Explicit list
- RLC size index	Reference to TS34.108 clause 6 Parameter

Information Element	Value/remark
	Set
- MAC logical channel priority	8
- Downlink RLC logical channel info	
- 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	8

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)

Downlink 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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1 DL_TFC6	UL_TFC1 DL_TFC6	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312 RB6: 312	RB5: 312 RB6: No data
2	DL_TFC2 DL_TFC7	UL_TFC2 DL_TFC7	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632 RB6: 632	RB5: 632 RB6: No data
3	DL_TFC3 DL_TFC8	UL_TFC3 DL_TFC8	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952 RB6: 952	RB5: 952 RB6: No data
4	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272	RB5: 1272 RB6: No data
5	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB5: 1272	RB5: No data RB6: 1272
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5 and RB6: Test data size has been set to the payload size of the DL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit). The UL RLC SDU size has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

18.1.2.72.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1 to 4: RLC SDUs on RB5 having the same content as the DL RLC SDUs sent by the SS in RB5.
 - for sub-test 5: RLC SDUs on RB6 having the same content as the DL RLC SDUs sent by the SS in RB6.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

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

18.1.2.73.1 Conformance requirement

See 18.1.2.4.1.

18.1.2.73.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.1.70.

18.1.2.73.3 Method of test

Uplink TFS:

	TFI	RB5 + RB6 + RB7 (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 + RB7, DCCH)
UL_TFC0	(TF0, TF0)
UL_TFC1	(TF1, TF0)
UL_TFC2	(TF2, TF0)
UL_TFC3	(TF3, TF0)
UL_TFC4	(TF4, TF0)
UL_TFC5	(TF0, TF1)
UL_TFC6	(TF1, TF1)
UL_TFC7	(TF2, TF1)
UL_TFC8	(TF3, TF1)
UL_TFC9	(TF4, TF1)

Downlink TFS:

	TFI	RB5 + RB6 + RB7 (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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 1)	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 2)
1	DL_TFC1 DL_TFC6	UL_TFC1 DL_TFC6	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312 RB6: 312 RB7: 312	RB5: 312 RB6: No data RB7: No data
2	DL_TFC2 DL_TFC7	UL_TFC2 DL_TFC7	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632 RB6: 632 RB7: 632	RB5: 632 RB6: No data RB7: No data
3	DL_TFC3 DL_TFC8	UL_TFC3 DL_TFC8	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952 RB6: 952 RB7: 952	RB5: 952 RB6: No data RB7: No data
4	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272 RB7: 1272	RB5: 1272 RB6: No data RB7: No data
5	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272 RB7: 1272	RB5: No data RB6: 1272 RB7: No data
6	DL_TFC4 DL_TFC9	UL_TFC4 DL_TFC9	DL_TFC0, DL_TFC5, UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272 RB6: 1272 RB7: 1272	RB5: No data RB6: No data RB7: 1272
NOTE 1: UL_TFC0, UL_TFC1 and UL_TFC5 are part of minimum set of TFCs. NOTE 2: See TS 34.109 [10] clause 5.3.2.6.2 for details regarding loopback of RLC SDUs. RB5 RB6 and 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 has been set equal to the size of the payload size of the UL TF under test minus 8 bits (the size of 7 bit length indicator and expansion bit).						

18.1.2.73.4 Test requirements

See 18.1.1.2 for definition of step 10 and step 15.

1. At step 10 the UE shall send RADIO BEARER SETUP COMPLETE.
2. At step 15a and step 15b the UE transmitted transport format shall be within the set of restricted TFCs as specified for the actual sub-test.
3. At step 15a and step 15b the UE shall return
 - for sub-test 1 to 4: RLC SDUs on RB5 having the same content as the DL RLC SDUs sent by the SS in RB5.
 - for sub-test 5: RLC SDUs on RB6 having the same content as the DL RLC SDUs sent by the SS in RB6.
 - for sub-test 6: RLC SDUs on RB6 having the same content as the DL RLC SDUs sent by the SS in RB7.
4. At step 15b the UE shall send at least one MEASUREMENT REPORT message.

18.1.3 Combinations on SCCPCH

18.1.3.1 Stand-alone signalling RB for PCCH

Implicitly tested.

NOTE The stand-alone signalling radio bearer for PCCH in TS 34.108, clause 6.11.5.4.4.1 is used in RRC test case 8.1.2.2.

18.1.3.2 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 6.11.5.4.4.2.

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.

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.

This configuration is verified in test case 18.1.3.2.1.

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 Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH.

This configuration is verified in test case 18.1.3.2.2.

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 Interactive/Background 32 kbps PS RAB and the FACH for SRBs on CCCH/ DCCH/ BCCH for connected mode UEs.

This configuration is verified in test case 18.1.3.2.3.

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

18.1.3.2.1.1 Conformance requirement

See 18.1.2.4.1

18.1.3.2.1.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 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 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.1.3 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.

Uplink TFS:

	TF	RB7+SRB (32kbps on RACH)
TFS	TF0, bits	1x171
	TF1, bits	1x363

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

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

Downlink TFCS:

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

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_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits	RB7: 312 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 the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).

See 18.1.1 for test procedure.

18.1.3.2.1.4 Test Requirements

See 18.1.1 for definition of step 15

- At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).
- At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

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

18.1.3.2.2.1 Conformance requirement

See 18.1.2.4

18.1.3.2.2.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 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 6.1.1.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.2.3 Method of Test

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

Uplink TFS:

	TF	RB7+SRB (32kbps on RACH)
TFS	TF0, bits	1x171
	TF1, bits	1x363

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

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

Downlink TFCS:

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

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_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits	RB7: 312 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 the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

See 18.1.1 for test procedure.

18.1.3.2.2.4 Test Requirements

See 18.1.1 for definition of step 15

- At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).

2. At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

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

18.1.3.2.3.1 Conformance requirement

See 18.1.2.4.1

18.1.3.2.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.1 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 6.11.5.4.5.1 (Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.2.3.3 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.

Uplink TFS:

	TF	RB7+SRB (32kbps on RACH)
TFS	TF0, bits	1x171
	TF1, bits	1x363

Uplink TFCS:

TFCI	RB7+SRB
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs	UL RLC SDU size (note)	Test data size (note)
1	DL_TFC3	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB7: 312 bits	RB7: 312 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 the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

See 18.1.1 for test procedure.

18.1.3.2.3.4 Test Requirements

See 18.1.1 for definition of step 15

- At step 15 the UE transmitted transport format shall be RB7/TF1 (1x363).
- At step 15 the UE shall return an RLC SDU on RB7 having the same content as sent by SS

18.1.3.3 Interactive/Background UL:12.8 DL:32 kbps RAB + SRBs for PCCH + SRB for CCCH + SRB for DCCH + SRB for BCCH

18.1.3.3.1 Conformance requirement

See 18.1.2.4

18.1.3.3.2 Test purpose

To verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clauses 6.11.5.4.4.2 and 6.11.5.4.5.2 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 6.11.5.4.5.2 (Interactive/Background 12.8 kbps PS RAB + SRB for CCCH + SRB for DCCH on PRACH) is used in uplink.

18.1.3.3.3 Method of Test

The contents of System Information Block type 5 and 6 shall be as specified in TS 34.108, clause 6.1.

Uplink TFS:

	TFI	RB8 (12.8kbps on RACH)
TFS	TF0, bits	0x170
	TF1, bits	1x170

Uplink TFCs:

TFCI	RB8
UL_TFC0	TF0
UL_TFC1	TF1

Downlink TFS:

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

Downlink TFCS:

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

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_TFC6	UL_TFC1	DL_TFC0, UL_TFC0	UL_TFC1, UL_TFC0	RB8: 128 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 the payload size of the UL TF under test minus 8 bits (size of 7 bit length indicator and expansion bit).						

See 18.1.1 for test procedure.

18.1.3.3.4 Test requirements

See 18.1.1 for definition of step 15

- At step 15 the UE transmitted transport format shall be RB8/TF1 (1x170).
- At step 15 the UE shall return an RLC SDU on RB8 having the same content as sent by SS

18.1.3.4 64.8kbps RB for MTCH with 40 ms TTI

18.1.3.4.1 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)

18.1.3.4.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.5.

18.1.3.4.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TF	RB for MTCH (64.8 kbps)
TFS	TF0, bits	0x665
	TF1, bits	1x665
	TF2, bits	2x665
	TF3, bits	3x665
	TF4, bits	4x665

Downlink TFCs:

TFCI	RB for MTCH (64.8 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)
DL_TFC2	(TF2)
DL_TFC3	(TF3)
DL_TFC4	(TF4)

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

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.

18.1.3.4.4 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.

18.1.3.5 129.6 kbps RB for MTCH with 40 ms TTI

18.1.3.5.1 Conformance Requirement

See 18.1.3.4.1.

18.1.3.5.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.6.

18.1.3.5.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TF	RB for MTCH (129.6 kbps 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 (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)

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.

18.1.3.5.4 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.

18.1.3.6 259.2 kbps RB for MTCH with 40 ms TTI

18.1.3.6.1 Conformance Requirement

See 18.1.3.4.1.

18.1.3.6.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.7.

18.1.3.6.3 Method of Test

See 14.1.5 for test procedure.

Downlink TFS:

	TFI	RB for MTCH (259.2 kbps 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.

18.1.3.6.4 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.

18.1.3.7 128kbps RB for MBSFN MTCH with 40 ms TTI

18.1.3.7.1 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)

18.1.3.7.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.9.

18.1.3.7.3 Method of Test

See subclause 18.2.1.6 for test procedure.

Downlink TFS:

	TF	RB for MTCH (128 kbps)
TFS	TF0, bits	0x2561
	TF1, bits	1x2561

Downlink TFCS:

TFCI	RB for MTCH (128 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (note 1)
1	DL_TFC1	DL_TFC0	2528
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.			

18.1.3.7.4 Test Requirements

See subclause 18.1.1.5 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 18.1.1.5 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.

18.1.3.8 192kbps RB for MBSFN MTCH with 40 ms TTI

18.1.3.8.1 Conformance Requirement

See 18.1.3.7.1.

18.1.3.8.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.10.

18.1.3.8.3 Method of Test

See subclause 18.1.1.5 for test procedure.

Downlink TFS:

	TF	RB for MTCH (192 kbps kbps)
TFS	TF0, bits	0x2561
	TF1, bits	3x2561

Downlink TFCS:

TFCI	RB for MTCH (192 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (note 1)
1	DL_TFC1	DL_TFC0	7616
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.			

18.1.3.8.4 Test Requirements

See subclause 18.1.1.5 for definition of steps 9 and 13.

- 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.
- 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 18.1.1.5 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.

18.1.3.9 384kbps RB for MBSFN MTCH with 40 ms TTI

18.1.3.9.1 Conformance Requirement

See 18.1.3.7.1.

18.1.3.9.2 Test purpose

Test to verify establishment and data transfer of reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.4.11.

18.1.3.9.3 Method of Test

See subclause 18.1.1.5 for test procedure.

Downlink TFS:

	TF	RB for MTCH (384 kbps kbps)
TFS	TF0, bits	0x2561
	TF1, bits	6x2561

Downlink TFCS:

TFCI	RB for MTCH (384 kbps)
DL_TFC0	(TF0)
DL_TFC1	(TF1)

Sub-tests:

Sub-test	Downlink TFCS Under test	Implicitly tested	Test data size (bits) (note 1)
1	DL_TFC1	DL_TFC0	15250
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.			

18.1.3.9.4 Test Requirements

See subclause 18.2.1.6 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 18.1.1.5 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.

18.1.4 Combinations on PRACH

18.1.4.1 Interactive/Background 32 kbps PS RAB + SRB for CCCH + SRB for DCCH

The reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.5.1 is implicitly tested by the test cases 18.1.3.2.1, 18.1.3.2.2, 18.1.3.2.3 and 18.1.3.3.

18.1.5 Combinations on DPCH and HS-PDSCH

18.1.5.1 Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.1.1 Conformance requirement

The mapping of transport block size, in bits, to TFR1 value is dependent upon the UE's HS-DSCH capability class.

Table 18.1.5.1.1: HS-DSCH physical layer and RLC and MAC-hs parameters for 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits	Maximum number of AM RLC entities	Minimum total RLC AM and MAC-hs buffer size [kBytes]
UE Category 1	12	5	7008	28160	6	50
UE Category 2	12	5	7008	56320	6	50
UE Category 3	12	5	7008	84480	6	50
UE Category 4	16	5	7008	28160	6	50
UE Category 5	16	5	7008	56320	6	50
UE Category 6	16	5	7008	84480	6	50
UE Category 7	12	5	10204	40944	6	50
UE Category 8	12	5	10204	81888	6	50
UE Category 9	12	5	10204	122832	6	50
UE Category 10	16	5	10204	40944	6	50
UE Category 11	16	5	10204	81888	6	50
UE Category 12	16	5	10204	122832	6	50
UE Category 13	16	5	14043	56320	6	100
UE Category 14	16	5	14043	112640	6	100
UE Category 15	16	5	14043	168960	6	100

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

If $k = 1..62$

$$L_k = \lfloor L_{\min} p^{k-1} \rfloor$$

where

$$p = \frac{6214}{5973} \text{ if the HS-DSCH physical layer category is between 1 and 3 inclusively,}$$

$$p = \frac{1292}{1228} \text{ if the HS-DSCH physical layer category is between 4 and 6 inclusively,}$$

$$p = \frac{1901}{1795} \text{ if the HS-DSCH physical layer category is between 7 and 9 inclusively,}$$

$$p = \frac{9445}{8877} \text{ if the HS-DSCH physical layer category is between 10 and 12 inclusively,}$$

$$p = \frac{2345}{2196} \text{ if the HS-DSCH physical layer category is between 13 and 15 inclusively,}$$

and

$$L_{\min} = 240$$

If $k = 63$ then,

$L_k = 2788$ if the HS-DSCH physical layer category is between 1 and 3 inclusively,

5600 if the HS-DSCH physical layer category is between 4 and 6 inclusively,

8416 if the HS-DSCH physical layer category is between 7 and 9 inclusively,

11226 if the HS-DSCH physical layer category is between 10 and 12 inclusively,

14043 if the HS-DSCH physical layer category is between 13 and 15 inclusively.

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 the following tables: –

Table 18.1.5.1.2: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [1, 3]

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	16	434	32	817	48	1540
1	240	17	451	33	851	49	1602
2	249	18	470	34	885	50	1667
3	259	19	489	35	921	51	1734
4	270	20	508	36	958	52	1804
5	281	21	529	37	996	53	1877
6	292	22	550	38	1037	54	1952
7	304	23	572	39	1078	55	2031
8	316	24	596	40	1122	56	2113
9	329	25	620	41	1167	57	2198
10	342	26	645	42	1214	58	2287
11	356	27	671	43	1263	59	2380
12	370	28	698	44	1314	60	2476
13	385	29	726	45	1367	61	2575
14	401	30	755	46	1423	62	2679
15	417	31	786	47	1480	63	2788

Table 18.1.5.1.3: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [4, 6]

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	16	514	32	1159	48	2613
1	240	17	541	33	1219	49	2749
2	252	18	569	34	1283	50	2893
3	265	19	598	35	1350	51	3043
4	279	20	630	36	1420	52	3202
5	294	21	662	37	1494	53	3369
6	309	22	697	38	1572	54	3544
7	325	23	733	39	1654	55	3729
8	342	24	772	40	1740	56	3924
9	360	25	812	41	1831	57	4128
10	379	26	854	42	1926	58	4343
11	398	27	899	43	2027	59	4570
12	419	28	946	44	2132	60	4808
13	441	29	995	45	2244	61	5058
14	464	30	1047	46	2361	62	5322
15	488	31	1101	47	2484	63	5600

Table 18.1.5.1.4: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [7, 9]

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	16	567	32	1421	48	3559
1	240	17	601	33	1505	49	3769
2	254	18	636	34	1594	50	3991
3	269	19	674	35	1688	51	4227
4	285	20	713	36	1787	52	4477
5	301	21	756	37	1893	53	4741
6	319	22	800	38	2005	54	5021
7	338	23	848	39	2123	55	5318
8	358	24	898	40	2249	56	5632
9	379	25	951	41	2383	57	5964
10	402	26	1007	42	2522	58	6317
11	425	27	1066	43	2671	59	6690
12	451	28	1129	44	2829	60	7085
13	477	29	1196	45	2996	61	7503
14	505	30	1267	46	3173	62	7946
15	535	31	1341	47	3360	63	8416

Table 18.1.5.1.5: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [10, 12]

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	16	608	32	1641	48	4427
1	240	17	647	33	1746	49	4711
2	255	18	688	34	1858	50	5012
3	271	19	732	35	1977	51	5333
4	289	20	779	36	2103	52	5674
5	307	21	829	37	2238	53	6037
6	327	22	882	38	2381	54	6424
7	348	23	939	39	2533	55	6835
8	370	24	999	40	2695	56	7272
9	394	25	1063	41	2868	57	7737
10	419	26	1131	42	3051	58	8232
11	446	27	1203	43	3247	59	8759
12	474	28	1280	44	3455	60	9320
13	505	29	1362	45	3676	61	9916
14	537	30	1449	46	3911	62	10550
15	571	31	1542	47	4161	63	11226

Table 18.1.5.1.6: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [13,15]

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	16	642	32	1836	48	5250
1	240	17	686	33	1961	49	5606
2	256	18	732	34	2094	50	5987
3	273	19	782	35	2236	51	6393
4	292	20	835	36	2388	52	6827
5	312	21	892	37	2550	53	7290
6	333	22	952	38	2723	54	7785
7	355	23	1017	39	2908	55	8313
8	380	24	1086	40	3105	56	8877
9	405	25	1160	41	3316	57	9479
10	433	26	1238	42	3541	58	10123
11	462	27	1322	43	3781	59	10809
12	494	28	1412	44	4037	60	11543
13	527	29	1508	45	4311	61	12326
14	563	30	1610	46	4604	62	13162
15	601	31	1719	47	4916	63	14056

Reference(s)

3GPP TS 25.321, 9.2.3.1 and Annex A

18.1.5.1.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.1.

18.1.5.1.3 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

Uplink TFS:

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

Uplink TFCS:

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

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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 TFCs.

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.

18.1.5.1.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

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

18.1.5.1a Interactive or background / UL:8 (multiframe) DL: [max bit rate depending on UE category] / PS RAB+ UL:3.4 DL:3.4 kbps SRBs for DCCH (multiframe) (REL-5)

18.1.5.1a.1 Conformance requirement

See clause 18.1.5.1.1.

18.1.5.1a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.1a.

18.1.5.1a.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

Uplink TFS:

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

Uplink TFCS:

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

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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 TFCs.

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.5.1a.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).
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.

18.1.5.1b Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (64QAM)

18.1.5.1b.1 Conformance requirement

The mapping of transport block size, in bits, to TFRI value is dependent upon the UE's HS-DSCH capability class.

Table 18.1.5.1b.1: HS-DSCH physical layer and RLC and MAC-hs parameters for 1.28 Mcps TDD HS-DSCH physical layer categories

HS-DSCH category	Maximum number of HS-DSCH codes per timeslot	Maximum number of HS-DSCH timeslots per TTI	Maximum number of HS-DSCH transport channel bits that can be received within an HS-DSCH TTI	Total number of soft channel bits	Supported modulations
Category 1	16	2	2788	11264	QPSK
Category 2	16	2	2788	22528	
Category 3	16	2	2788	33792	
Category 4	16	2	5600	22528	QPSK,16QAM
Category 5	16	2	5600	45056	
Category 6	16	2	5600	67584	
Category 7	16	3	8416	33792	
Category 8	16	3	8416	67584	
Category 9	16	3	8416	101376	
Category 10	16	4	11226	45056	
Category 11	16	4	11226	90112	
Category 12	16	4	11226	135168	
Category 13	16	5	14043	56320	
Category 14	16	5	14043	112640	
Category 15	16	5	14043	168960	
Category 16	16	3	12636	50688	QPSK,16QAM, 64QAM
Category 17	16	3	12636	101376	
Category 18	16	3	12636	152064	
Category 19	16	4	16856	67584	
Category 20	16	4	16856	135168	
Category 21	16	4	16856	202752	
Category 22	16	5	21076	84480	
Category 23	16	5	21076	168960	
Category 24	16	5	21076	253440	

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

If $k = 1..62$

$$L_k = \lfloor L_{\min} p^{k-1} \rfloor$$

where

$$p = \frac{6214}{5973} \text{ if the HS-DSCH physical layer category is between 1 and 3 inclusively,}$$

$$p = \frac{1292}{1228} \text{ if the HS-DSCH physical layer category is between 4 and 6 inclusively,}$$

$$p = \frac{1901}{1795} \text{ if the HS-DSCH physical layer category is between 7 and 9 inclusively,}$$

$$p = \frac{9445}{8877} \text{ if the HS-DSCH physical layer category is between 10 and 12 inclusively,}$$

$$p = \frac{2345}{2196} \text{ if the HS-DSCH physical layer category is between 13 and 15 inclusively,}$$

$$p = \frac{4053}{3802} \text{ if the HS-DSCH physical layer category is between 16 and 18 inclusively,}$$

$$p = \frac{9807}{9157} \text{ if the HS-DSCH physical layer category is between 19 and 21 inclusively,}$$

$$p = \frac{359}{334} \text{ if the HS-DSCH physical layer category is between 22 and 24 inclusively.}$$

and

$$L_{\min} = 240$$

If $k = 63$ then,

$L_k = 2788$ if the HS-DSCH physical layer category is between 1 and 3 inclusively,

5600 if the HS-DSCH physical layer category is between 4 and 6 inclusively,

8416 if the HS-DSCH physical layer category is between 7 and 9 inclusively,

11226 if the HS-DSCH physical layer category is between 10 and 12 inclusively,

14043 if the HS-DSCH physical layer category is between 13 and 15 inclusively,

12636 if the HS-DSCH physical layer category is between 16 and 18 inclusively,

16856 if the HS-DSCH physical layer category is between 19 and 21 inclusively,

21075 if the HS-DSCH physical layer category is between 22 and 24 inclusively.

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 the following tables: –

Table 18.1.5.1b.2: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [1, 3]

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	16	434	32	817	48	1540
1	240	17	451	33	851	49	1602
2	249	18	470	34	885	50	1667
3	259	19	489	35	921	51	1734
4	270	20	508	36	958	52	1804
5	281	21	529	37	996	53	1877
6	292	22	550	38	1037	54	1952
7	304	23	572	39	1078	55	2031
8	316	24	596	40	1122	56	2113
9	329	25	620	41	1167	57	2198
10	342	26	645	42	1214	58	2287
11	356	27	671	43	1263	59	2380
12	370	28	698	44	1314	60	2476
13	385	29	726	45	1367	61	2575
14	401	30	755	46	1423	62	2679
15	417	31	786	47	1480	63	2788

Table 18.1.5.1b.3: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [4, 6]

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	16	514	32	1159	48	2613
1	240	17	541	33	1219	49	2749
2	252	18	569	34	1283	50	2893
3	265	19	598	35	1350	51	3043
4	279	20	630	36	1420	52	3202
5	294	21	662	37	1494	53	3369
6	309	22	697	38	1572	54	3544
7	325	23	733	39	1654	55	3729
8	342	24	772	40	1740	56	3924
9	360	25	812	41	1831	57	4128
10	379	26	854	42	1926	58	4343
11	398	27	899	43	2027	59	4570
12	419	28	946	44	2132	60	4808
13	441	29	995	45	2244	61	5058
14	464	30	1047	46	2361	62	5322
15	488	31	1101	47	2484	63	5600

Table 18.1.5.1b.4: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [7, 9]

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	16	567	32	1421	48	3559
1	240	17	601	33	1505	49	3769
2	254	18	636	34	1594	50	3991
3	269	19	674	35	1688	51	4227
4	285	20	713	36	1787	52	4477
5	301	21	756	37	1893	53	4741
6	319	22	800	38	2005	54	5021
7	338	23	848	39	2123	55	5318
8	358	24	898	40	2249	56	5632
9	379	25	951	41	2383	57	5964
10	402	26	1007	42	2522	58	6317
11	425	27	1066	43	2671	59	6690
12	451	28	1129	44	2829	60	7085
13	477	29	1196	45	2996	61	7503
14	505	30	1267	46	3173	62	7946
15	535	31	1341	47	3360	63	8416

Table 18.1.5.1b.5: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [10, 12]

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	16	608	32	1641	48	4427
1	240	17	647	33	1746	49	4711
2	255	18	688	34	1858	50	5012
3	271	19	732	35	1977	51	5333
4	289	20	779	36	2103	52	5674
5	307	21	829	37	2238	53	6037
6	327	22	882	38	2381	54	6424
7	348	23	939	39	2533	55	6835
8	370	24	999	40	2695	56	7272
9	394	25	1063	41	2868	57	7737
10	419	26	1131	42	3051	58	8232
11	446	27	1203	43	3247	59	8759
12	474	28	1280	44	3455	60	9320
13	505	29	1362	45	3676	61	9916
14	537	30	1449	46	3911	62	10550
15	571	31	1542	47	4161	63	11226

Table 18.1.5.1b.6: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [13,15]

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	16	642	32	1836	48	5250
1	240	17	686	33	1961	49	5606
2	256	18	732	34	2094	50	5987
3	273	19	782	35	2236	51	6393
4	292	20	835	36	2388	52	6827
5	312	21	892	37	2550	53	7290
6	333	22	952	38	2723	54	7785
7	355	23	1017	39	2908	55	8313
8	380	24	1086	40	3105	56	8877
9	405	25	1160	41	3316	57	9479
10	433	26	1238	42	3541	58	10123
11	462	27	1322	43	3781	59	10809
12	494	28	1412	44	4037	60	11543
13	527	29	1508	45	4311	61	12326
14	563	30	1610	46	4604	62	13162
15	601	31	1719	47	4916	63	14056

Table 18.1.5.1b.7: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [16,18]

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	16	626	32	1741	48	4843
1	240	17	667	33	1856	49	5163
2	255	18	711	34	1978	50	5503
3	272	19	758	35	2109	51	5867
4	290	20	808	36	2248	52	6254
5	309	21	861	37	2397	53	6667
6	330	22	918	38	2555	54	7107
7	352	23	979	39	2724	55	7576
8	375	24	1044	40	2904	56	8077
9	400	25	1113	41	3095	57	8610
10	426	26	1186	42	3300	58	9178
11	454	27	1264	43	3518	59	9784
12	484	28	1348	44	3750	60	10430
13	516	29	1437	45	3998	61	11119
14	550	30	1532	46	4261	62	11853
15	587	31	1633	47	4543	63	12636

Table 18.1.5.1b.8: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [19,21]

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	16	671	32	2011	48	6025
1	240	17	719	33	2154	49	6453
2	257	18	770	34	2307	50	6911
3	275	19	824	35	2470	51	7402
4	294	20	883	36	2646	52	7927
5	315	21	945	37	2833	53	8490
6	338	22	1013	38	3035	54	9093
7	362	23	1085	39	3250	55	9738
8	387	24	1162	40	3481	56	10429
9	415	25	1244	41	3728	57	11170
10	444	26	1332	42	3993	58	11962
11	476	27	1427	43	4276	59	12812
12	510	28	1528	44	4580	60	13721
13	546	29	1637	45	4905	61	14695
14	585	30	1753	46	5253	62	15738
15	626	31	1878	47	5626	63	16856

Table 18.1.5.1b.9: HSDPA Transport Block Sizes for 1.28 Mcps TDD, for HS-DSCH physical layer category [22,24]

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	16	708	32	2249	48	7137
1	240	17	761	33	2417	49	7672
2	257	18	818	34	2598	50	8246
3	277	19	879	35	2792	51	8863
4	298	20	945	36	3001	52	9527
5	320	21	1016	37	3226	53	10240
6	344	22	1092	38	3468	54	11006
7	370	23	1174	39	3727	55	11830
8	397	24	1262	40	4006	56	12715
9	427	25	1356	41	4306	57	13667
10	459	26	1458	42	4628	58	14690
11	493	27	1567	43	4975	59	15790
12	530	28	1685	44	5347	60	16972
13	570	29	1811	45	5748	61	18242
14	613	30	1946	46	6178	62	19608
15	659	31	2092	47	6640	63	21076

Reference(s)

3GPP TS 25.321, 9.2.3.1 and Annex A

18.1.5.1b.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.1.

18.1.5.1b.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

Uplink TFS:

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

Uplink TFCS:

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

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission 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	16	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312
	17	6	512	256					
	18	8	512	512					
	19	4	512	128					
	20	6	512	256					
	21	8	512	512					
	22	4	512	128					
	23	6	512	256					
24	8	512	512						
2	16	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632
	17	6	512	256					
	18	8	512	512					
	19	4	512	128					
	20	6	512	256					
	21	8	512	512					
	22	4	512	128					
	23	6	512	256					
24	8	512	512						
	10	4	512	128					

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.5.1b.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).
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.

18.1.5.2 Interactive or background / UL:16 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.2.1 Conformance requirement

See clause 18.1.5.1.1.

18.1.5.2.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.2.

18.1.5.2.3 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

Uplink TFS:

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

Uplink TFCS:

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

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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 TFCs.

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.

18.1.5.2.4 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 (1x336).
 - for sub-test 2: TF2 (2x336).
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.

18.1.5.2a Interactive or background / UL:16(multiframe) DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH(multiframe) (REL-5)

18.1.5.2a.1 Conformance requirement

See clause 18.1.5.1.1.

18.1.5.2a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.2a.

18.1.5.2a.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

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
3	1	4	512	128	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
4	1	4	512	128	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					

	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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.

18.1.5.2a.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- 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).
- 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.

18.1.5.3 Interactive or background / UL:32 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.3.1 Conformance requirement

See clause 18.1.5.1.1.

18.1.5.3.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.3.

18.1.5.3.3 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

Uplink TFS:

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

Uplink TFCS:

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

Sub-tests:

Sub-test	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission 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	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC4	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC5	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.5.3.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

- 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).

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.

18.1.5.3a Interactive or background / UL:32(multiframe) DL: [max bit rate depending on UE category] / PS RAB +UL:3.4 DL:3.4 kbps SRBs for DCCH(multiframe) (REL-5)

18.1.5.3a.1 Conformance requirement

See clause 18.1.5.1.1.

18.1.5.3a.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.3a.

18.1.5.3a.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

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
3	1	4	512	128	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
4	1	4	512	128	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					

	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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.

18.1.5.3a.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.

18.1.5.4 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 (REL-5)

18.1.5.4.1 Conformance requirement

See 18.1.5.1.1

18.1.5.4.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.4.

18.1.5.4.3 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

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
3	1	4	512	128	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
4	1	4	512	128	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					

	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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.

18.1.5.4.4 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.

18.1.5.5 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 (REL-5)

18.1.5.5.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.5.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.5.

18.1.5.5.3 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

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
3	1	4	512	128	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 1272
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
4	1	4	512	128	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 2552
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					

	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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.

18.1.5.5.4 Test requirements

See 14.1.3.5 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- 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).
- 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.

18.1.5.6 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:32 DL:[Bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.6.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.6.

18.1.5.6.3 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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps)	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)

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:32 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 Categor y	Number of HARQ processe s	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	2	512	256	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	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	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	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	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	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.5.6.4 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.

18.1.5.7 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 (REL-5)

18.1.5.7.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.7.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.7.

18.1.5.7.3 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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps, 20ms)	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)

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	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	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	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	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	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	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							
4	1	8	256	256	656	DL_TFC1	UL_TFC13	DL_TFC0,	UL_TFC0,	RB5: 39	RB5: 39

	2	8	256	256				DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC15, UL_TFC28	RB6: 103 RB7: 60 RB8: 1272	RB6: No data RB7: No data RB8: See note 4
	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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
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 TFCs.											
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.											

18.1.5.6.4 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.

18.1.5.8 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

18.1.5.8.1 Conformance requirement

See 18.5.1.1.

18.1.5.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.8.

18.1.5.8.3 Method of test

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 <i>SDU Discard Mode</i> 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 .	

Uplink TFS:

	TFI	RB5 (Conv. 64 kbps)	RB6 (/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:

	TF	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 Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	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	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	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	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	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	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							
4	1	8	256	256	656	DL_TFC1	UL_TFC9	DL_TFC0,	UL_TFC0,	RB5: 640	RB5: 4x640

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
	2	8	256	256				DL_TFC2, UL_TFC0, UL_TFC10	UL_TFC1, UL_TFC2, UL_TFC9, UL_TFC10, UL_TFC19	RB6: 1272	RB6: See note 4
	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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
<p>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.</p> <p>NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, and UL_TFC10 are part of minimum set of TFCs.</p> <p>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 $N \times \text{UL RLC payload size} - 8$ 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.</p>											

18.1.5.8.4 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.

18.1.5.9 Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + 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 (REL-5)

18.1.5.9.1 Conformance requirement

See 18.1.5.1.1

18.1.5.9.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.9.

18.1.5.9.3 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

Uplink TFS:

	TFI	RB5 (64 kbps, 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

NOTE: TB size concerns to TS 34.108, clause 6.10.2.4.1.57

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	1	4	512	128	336	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
2	1	4	512	128	656	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
3	1	4	512	128	336	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					
	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	512					
4	1	4	512	128	656	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	2	6	512	256					
	3	8	512	512					
	4	4	512	128					
	5	6	512	256					
	6	8	512	512					
	7	4	512	128					
	8	6	512	256					
	9	8	512	512					
	10	4	512	128					
	11	6	512	256					

	12	8	512	512					
	13	4	512	128					
	14	6	512	256					
	15	8	512	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.

18.1.5.9.4 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 (1x340).
 - for sub-test 2: TF2 (2x340).
 - for sub-test 3: TF3 (3x340).
 - for sub-test 4: TF4 (4x340).

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.

18.1.5.10 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:384 DL:[max bit rate depending on the UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.10.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.10.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.13.

18.1.5.10.3 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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (384 kbps, 20ms)	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
	TF5, bits	N/A	N/A	N/A	8x336	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)

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 excluding TF0) then 5 sub-tests have 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 Transmission 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	2	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_TFC19	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	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_TFC23	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	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_TFC26	RB5: 81 RB6: 103 RB7: 60 RB8: 952	RB5: 81 RB6: 103 RB7: 60 RB8: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

4	1	8	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_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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
5	1	8	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: 2552	RB5: 81 RB6: 103 RB7: 60 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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
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 TFCs.											
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.											

18.1.5.10.4 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.

18.1.5.11 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL:64 DL: [max bit rate depending on UE category] / PS RAB + 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 (REL-5)

18.1.5.11.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.11.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.10.

18.1.5.11.3 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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 + RB9 (64 kbps, 20ms)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x340	0x148
	TF1, bits	1x39	1x103	1x60	1x340	1x148
	TF2, bits	1x81	N/A	N/A	2x340	N/A
	TF3, bits	N/A	N/A	N/A	3x340	N/A
	TF4, bits	N/A	N/A	N/A	4x340	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)

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 Categor y	Number of HARQ processe s	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	2	512	256	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 +RB9:312	RB5: 39 RB6: No data RB7: No data RB8 ,RB9: See note 4,
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	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+RB9: 632	RB5: 81 RB6: 103 RB7: 60 RB8 ,RB9: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	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+RB9: 952	RB5: 81 RB6: 103 RB7: 60 RB8 ,RB9: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							

4	11	8	512	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 +RB9: 1272	RB5: 39 RB6: No data RB7: No data RB8 ,RB9: See note 4
	12	8	512	256							
	1	8	256	256							
	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							
	10	8	1024	1024							
	11	8	256	256							
12	8	256	256								
<p>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.</p> <p>NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3 and UL_TFC15 are part of minimum set of TFCIs.</p> <p>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.</p> <p>NOTE 4: The test data size for RB8,RB9 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.and for each subtest .</p>											

18.1.5.11.4 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.

18.1.5.12 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL:64 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.12.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.16.

18.1.5.12.3 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

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps tti 20ms)	RB9 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1, TF0)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1, TF0)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1, TF0)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1, TF0)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1, TF0)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1, TF0)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1, TF0)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1, TF0)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1, TF0)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1, TF0)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1, TF0)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1, TF0)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1, TF0)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1, TF0)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1, TF0)
UL_TFC30	(TF0, TF0, TF0, TF0, TF0, TF1)
UL_TFC31	(TF1, TF0, TF0, TF0, TF0, TF1)
UL_TFC32	(TF2, TF1, TF1, TF0, TF0, TF1)
UL_TFC33	(TF0, TF0, TF0, TF1, TF0, TF1)
UL_TFC34	(TF1, TF0, TF0, TF1, TF0, TF1)
UL_TFC35	(TF2, TF1, TF1, TF1, TF0, TF1)
UL_TFC36	(TF0, TF0, TF0, TF2, TF0, TF1)

UL_TFC37	(TF1, TF0, TF0, TF2, TF0, TF1)
UL_TFC38	(TF2, TF1, TF1, TF2, TF0, TF1)
UL_TFC39	(TF0, TF0, TF0, TF3, TF0, TF1)
UL_TFC40	(TF1, TF0, TF0, TF3, TF0, TF1)
UL_TFC41	(TF2, TF1, TF1, TF3, TF0, TF1)
UL_TFC42	(TF0, TF0, TF0, TF4, TF0, TF1)
UL_TFC43	(TF1, TF0, TF0, TF4, TF0, TF1)
UL_TFC44	(TF2, TF1, TF1, TF4, TF0, TF1)
UL_TFC45	(TF0, TF0, TF0, TF0, TF1, TF1)
UL_TFC46	(TF1, TF0, TF0, TF0, TF1, TF1)
UL_TFC47	(TF2, TF1, TF1, TF0, TF1, TF1)
UL_TFC48	(TF0, TF0, TF0, TF1, TF1, TF1)
UL_TFC49	(TF1, TF0, TF0, TF1, TF1, TF1)
UL_TFC50	(TF2, TF1, TF1, TF1, TF1, TF1)
UL_TFC51	(TF0, TF0, TF0, TF2, TF1, TF1)
UL_TFC52	(TF1, TF0, TF0, TF2, TF1, TF1)
UL_TFC53	(TF2, TF1, TF1, TF2, TF1, TF1)
UL_TFC54	(TF0, TF0, TF0, TF3, TF1, TF1)
UL_TFC55	(TF1, TF0, TF0, TF3, TF1, TF1)
UL_TFC56	(TF2, TF1, TF1, TF3, TF1, TF1)
UL_TFC57	(TF0, TF0, TF0, TF4, TF1, TF1)
UL_TFC58	(TF1, TF0, TF0, TF4, TF1, TF1)
UL_TFC59	(TF2, TF1, TF1, TF4, 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:32 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_TFC19 for TF1, UL_TFC23 for TF2, UL_TFC26 for TF3 and UL_TFC58 for TF4.

Sub- tes	UE Categor y	Number of HARQ processe s	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	2	512	256	336	DL_TFC1	UL_TFC19	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 RB9:312	RB5: 39 RB6: No data RB7: No data RB8,RB9: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	656	DL_TFC2	UL_TFC23	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 RB9:312	RB5: 81 RB6: 103 RB7: 60 RB8,RB9: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	512	256	336	DL_TFC2	UL_TFC26	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 RB9:312	RB5: 81 RB6: 103 RB7: 60 RB8,RB9: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

4	1	8	256	256	656	DL_TFC1	UL_TFC58	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC15, UL_TFC58	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9:312	RB5: 39 RB6: No data RB7: No data RB8,RB9: 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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
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 TFCs.											
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 $N \times \text{UL RLC payload size} - 8$ 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, RB9 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.1.5.12.4 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.

18.1.5.13 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL:16 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.13.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.13.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.14.

18.1.5.13.3 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

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (16 kbps tti 40ms)	RB9 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9 DCCH)
UL_TFC0	(TF0,TF0,TF0,TF0,TF0,TF0)
UL_TFC1	(TF1,TF0,TF0,TF0,TF0,TF0)
UL_TFC2	(TF2,TF1,TF1,TF0,TF0,TF0)
UL_TFC3	(TF0,TF0,TF0,TF1,TF0,TF0)
UL_TFC4	(TF1,TF0,TF0,TF1,TF0,TF0)
UL_TFC5	(TF2,TF1,TF1,TF1,TF0,TF0)
UL_TFC6	(TF0,TF0,TF0,TF2,TF0,TF0)
UL_TFC7	(TF1,TF0,TF0,TF2,TF0,TF0)
UL_TFC8	(TF2,TF1,TF1,TF2,TF0,TF0)
UL_TFC9	(TF0,TF0,TF0,TF0,TF1,TF0)
UL_TFC10	(TF1,TF0,TF0,TF0,TF1,TF0)
UL_TFC11	(TF2,TF1,TF1,TF0,TF1,TF0)
UL_TFC12	(TF0,TF0,TF0,TF1,TF1,TF0)
UL_TFC13	(TF1,TF0,TF0,TF1,TF1,TF0)
UL_TFC14	(TF2,TF1,TF1,TF1,TF1,TF0)
UL_TFC15	(TF0,TF0,TF0,TF2,TF1,TF0)
UL_TFC16	(TF1,TF0,TF0,TF2,TF1,TF0)
UL_TFC17	(TF2,TF1,TF1,TF2,TF1,TF0)
UL_TFC18	(TF0,TF0,TF0,TF0,TF0,TF1)
UL_TFC19	(TF1,TF0,TF0,TF0,TF0,TF1)
UL_TFC20	(TF2,TF1,TF1,TF0,TF0,TF1)
UL_TFC21	(TF0,TF0,TF0,TF1,TF0,TF1)
UL_TFC22	(TF1,TF0,TF0,TF1,TF0,TF1)
UL_TFC23	(TF2,TF1,TF1,TF1,TF0,TF1)
UL_TFC24	(TF0,TF0,TF0,TF2,TF0,TF1)
UL_TFC25	(TF1,TF0,TF0,TF2,TF0,TF1)
UL_TFC26	(TF2,TF1,TF1,TF2,TF0,TF1)
UL_TFC27	(TF0,TF0,TF0,TF0,TF1,TF1)
UL_TFC28	(TF1,TF0,TF0,TF0,TF1,TF1)
UL_TFC29	(TF2,TF1,TF1,TF0,TF1,TF1)
UL_TFC30	(TF0,TF0,TF0,TF1,TF1,TF1)
UL_TFC31	(TF1,TF0,TF0,TF1,TF1,TF1)
UL_TFC32	(TF2,TF1,TF1,TF1,TF1,TF1)
UL_TFC33	(TF0,TF0,TF0,TF2,TF1,TF1)
UL_TFC34	(TF1,TF0,TF0,TF2,TF1,TF1)
UL_TFC35	(TF2,TF1,TF1,TF2,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:16 kbps radio bearer (RB8) has the highest number of transport formats (2 excluding TF0) and RB 5,6,7 then 2 sub-tests have been defined. The selected UL TFCI to achieve test coverage of TF1 to TF2 for RB8 and for the different speech transport formats are: UL_TFC13 for TF1, UL_TFC17 for TF2.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	336	DL_TFC1	UL_TFC13	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC4, UL_TFC9, UL_TFC13	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9:312	RB5: 39 RB6: No data RB7: No data RB8,RB9: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	656	DL_TFC2	UL_TFC17	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC8, UL_TFC9, UL_TFC17	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9:312	RB5: 81 RB6: 103 RB7: 60 RB8,RB9: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
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_TFC9 are part of minimum set of TFCs.											
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 ,RB9 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.1.5.13.4 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.

18.1.5.14 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL:32 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.14.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.14.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.15.

18.1.5.14.3 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

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps tti 40ms)	RB9 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3 bits	N/A	N/A	N/A	3x336	N/A	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A	N/A

Uplink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
UL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
UL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
UL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
UL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
UL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
UL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
UL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
UL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
UL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
UL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
UL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
UL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
UL_TFC12	(TF0, TF0, TF0, TF4, TF0, TF0)
UL_TFC13	(TF1, TF0, TF0, TF4, TF0, TF0)
UL_TFC14	(TF2, TF1, TF1, TF4, TF0, TF0)
UL_TFC15	(TF0, TF0, TF0, TF0, TF1, TF0)
UL_TFC16	(TF1, TF0, TF0, TF0, TF1, TF0)
UL_TFC17	(TF2, TF1, TF1, TF0, TF1, TF0)
UL_TFC18	(TF0, TF0, TF0, TF1, TF1, TF0)
UL_TFC19	(TF1, TF0, TF0, TF1, TF1, TF0)
UL_TFC20	(TF2, TF1, TF1, TF1, TF1, TF0)
UL_TFC21	(TF0, TF0, TF0, TF2, TF1, TF0)
UL_TFC22	(TF1, TF0, TF0, TF2, TF1, TF0)
UL_TFC23	(TF2, TF1, TF1, TF2, TF1, TF0)
UL_TFC24	(TF0, TF0, TF0, TF3, TF1, TF0)
UL_TFC25	(TF1, TF0, TF0, TF3, TF1, TF0)
UL_TFC26	(TF2, TF1, TF1, TF3, TF1, TF0)
UL_TFC27	(TF0, TF0, TF0, TF4, TF1, TF0)
UL_TFC28	(TF1, TF0, TF0, TF4, TF1, TF0)
UL_TFC29	(TF2, TF1, TF1, TF4, TF1, TF0)
UL_TFC30	(TF0, TF0, TF0, TF0, TF0, TF1)
UL_TFC31	(TF1, TF0, TF0, TF0, TF0, TF1)
UL_TFC32	(TF2, TF1, TF1, TF0, TF0, TF1)
UL_TFC33	(TF0, TF0, TF0, TF1, TF0, TF1)
UL_TFC34	(TF1, TF0, TF0, TF1, TF0, TF1)
UL_TFC35	(TF2, TF1, TF1, TF1, TF0, TF1)
UL_TFC36	(TF0, TF0, TF0, TF2, TF0, TF1)
UL_TFC37	(TF1, TF0, TF0, TF2, TF0, TF1)
UL_TFC38	(TF2, TF1, TF1, TF2, TF0, TF1)
UL_TFC39	(TF0, TF0, TF0, TF3, TF0, TF1)
UL_TFC40	(TF1, TF0, TF0, TF3, TF0, TF1)
UL_TFC41	(TF2, TF1, TF1, TF3, TF0, TF1)
UL_TFC42	(TF0, TF0, TF0, TF4, TF0, TF1)
UL_TFC43	(TF1, TF0, TF0, TF4, TF0, TF1)
UL_TFC44	(TF2, TF1, TF1, TF4, TF0, TF1)
UL_TFC45	(TF0, TF0, TF0, TF0, TF1, TF1)
UL_TFC46	(TF1, TF0, TF0, TF0, TF1, TF1)
UL_TFC47	(TF2, TF1, TF1, TF0, TF1, TF1)
UL_TFC48	(TF0, TF0, TF0, TF1, TF1, TF1)
UL_TFC49	(TF1, TF0, TF0, TF1, TF1, TF1)
UL_TFC50	(TF2, TF1, TF1, TF1, TF1, TF1)
UL_TFC51	(TF0, TF0, TF0, TF2, TF1, TF1)
UL_TFC52	(TF1, TF0, TF0, TF2, TF1, TF1)
UL_TFC53	(TF2, TF1, TF1, TF2, TF1, TF1)
UL_TFC54	(TF0, TF0, TF0, TF3, TF1, TF1)
UL_TFC55	(TF1, TF0, TF0, TF3, TF1, TF1)
UL_TFC56	(TF2, TF1, TF1, TF3, TF1, TF1)
UL_TFC57	(TF0, TF0, TF0, TF4, TF1, TF1)
UL_TFC58	(TF1, TF0, TF0, TF4, TF1, TF1)
UL_TFC59	(TF2, TF1, TF1, TF4, 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:32 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_TFC19 for TF1, UL_TFC23 for TF2, UL_TFC26 for TF3 and UL_TFC58 for TF4.

Sub- tes	UE Categor y	Number of HARQ processe s	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	2	512	256	336	DL_TFC1	UL_TFC19	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 RB9:312	RB5: 39 RB6: No data RB7: No data RB8,RB9: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	656	DL_TFC2	UL_TFC23	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 RB9:312	RB5: 81 RB6: 103 RB7: 60 RB8,RB9: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	512	256	336	DL_TFC2	UL_TFC26	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 RB9:312	RB5: 81 RB6: 103 RB7: 60 RB8,RB9: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

4	1	8	256	256	656	DL_TFC1	UL_TFC58	DL_TFC0, DL_TFC3, UL_TFC0, UL_TFC15	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3, UL_TFC13, UL_TFC15, UL_TFC58	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9:312	RB5: 39 RB6: No data RB7: No data RB8,RB9: 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							
	10	8	1024	1024							
	11	8	256	256							
	12	8	256	256							
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 TFCs.											
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 $N \times \text{UL RLC payload size} - 8$ 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, RB9 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.											

18.1.5.14.4 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.

18.1.5.15 Streaming / UL:64 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.15.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.15.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.17.

18.1.5.15.3 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

Uplink TFS:

	TFI	RB5 (64 kbps tti 20ms)	RB6 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x640	0x336	0x148
	TF1, bits	2x640	1x336	1x148

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF0, TF1)
UL_TFC3	(TF0, TF1, TF1)
UL_TFC4	(TF1, TF0, TF0)
UL_TFC5	(TF1, TF1, TF0)
UL_TFC6	(TF1, TF0, TF1)
UL_TFC7	(TF1, TF1, TF1)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink Interactive Background and Streaming radio bearer..

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	656	N/A	UL_TFC1	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 632 RB6: 312	RB5,RB6: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	656	N/A	UL_TFC4	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5: 632 RB6: 312	RB5,RB6: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	512	256	656	N/A	UL_TFC5	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC7	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632 RB6: 312	RB5,RB6: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

- 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_TFC2, are part of minimum set of TFCs.
- 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 $N \times \text{UL RLC payload size} - 8$ 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 ,RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.1.5.15.4 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.

18.1.5.16 Streaming / UL:32 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.16.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.16.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.11.

18.1.5.16.3 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

Uplink TFS:

	TFI	RB5 (32 kbps tti 20ms)	RB6 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148
	TF2, bits	2x336	N/A	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	(TF0,TF1,TF0)
UL_TFC4	(TF1,TF1,TF0)
UL_TFC5	(TF2,TF1,TF0)
UL_TFC6	(TF0,TF0,TF1)
UL_TFC7	(TF1,TF0,TF1)
UL_TFC8	(TF2,TF0,TF1)
UL_TFC9	(TF0,TF1,TF1)
UL_TFC10	(TF1,TF1,TF1)
UL_TFC11	(TF2,TF1,TF1)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink Interactive Background and Streaming radio bearer..

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	336	N/A	UL_TFC1	DL_TFC0, UL_TFC0, UL_TFC1, UL_TFC7	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC7	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	656	N/A	UL_TFC2	DL_TFC0, UL_TFC0, UL_TFC8	UL_TFC0, UL_TFC2, UL_TFC8	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	512	256	336	N/A	UL_TFC3	DL_TFC0, UL_TFC0, UL_TFC9	UL_TFC0, UL_TFC2, UL_TFC3, UL_TFC9	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

4	1	8	512	256	656	N/A	UL_TFC4	DL_TFC0, UL_TFC0, UL_TFC10	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC10	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							
	4	1	8	512							
2		8	512	256							
3		8	512	256							
4		8	512	256							
5		8	512	256							
6		8	512	256							
7		8	1536	512							
8		8	1536	512							
9		8	2047	512							
10		8	2047	1024							
11		8	512	256							
12		8	512	256							
<p>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.</p> <p>NOTE 2: UL_TFC0, UL_TFC2 are part of minimum set of TFCs.</p> <p>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 $N \times \text{UL RLC payload size} - 8$ 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.</p> <p>NOTE 4: The test data size for RB5, RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.</p>											

18.1.5.16.4 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.

18.1.5.17 Streaming / UL:16 DL: [max bit rate depending on UE category] / PS RAB + Interactive or background / UL:8 DL: [max bit rate depending on UE category] / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH (REL-5)

18.1.5.17.1 Conformance requirement

See 18.1.5.1.1.

18.1.5.17.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.12.

18.1.5.17.3 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

Uplink TFS:

	TFI	RB5 (16 kbps tti 20ms)	RB6 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

Uplink TFCS:

TFCI	(RB5, RB6, DCCH)
UL_TFC0	(TF0, TF0, TF0)
UL_TFC1	(TF0, TF1, TF0)
UL_TFC2	(TF0, TF0, TF1)
UL_TFC3	(TF0, TF1, TF1)
UL_TFC4	(TF1, TF0, TF0)
UL_TFC5	(TF1, TF1, TF0)
UL_TFC6	(TF1, TF0, TF1)
UL_TFC7	(TF1, TF1, TF1)

Sub-tests:

The principle used to select sub-tests has been to cover all uplink Interactive Background and Streaming radio bearer.

Sub-tes	UE Category	Number of HARQ processes	RLC Receiving window size (note 1)	RLC Transmission window size (note 1)	MAC-d PDU size (bits)	Downlink TFCs Under test	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)	Test data size (bits) (note 4)
1	1	2	512	256	336	N/A	UL_TFC1	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC3	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC3	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	2	512	256							
	3	3	512	256							
	4	3	512	256							
	5	6	512	256							
	6	6	512	256							
	7	6	1536	512							
	8	6	1536	512							
	9	6	2047	512							
	10	6	2047	512							
	11	3	512	256							
	12	6	512	256							
2	1	2	256	256	336	N/A	UL_TFC4	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC6	UL_TFC0, UL_TFC2, UL_TFC4, UL_TFC6	RB5:312 RB6: 312	RB5,RB6: See note 4
	2	2	256	256							
	3	3	256	256							
	4	3	256	256							
	5	6	256	256							
	6	6	256	256							
	7	6	512	512							
	8	6	512	512							
	9	6	1024	512							
	10	6	1024	1024							
	11	3	256	256							
	12	6	256	256							
3	1	8	512	256	336	N/A	UL_TFC5	DL_TFC0, UL_TFC0, UL_TFC2, UL_TFC7	UL_TFC0, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 312 RB6: 312	RB5,RB6: See note 4
	2	8	512	256							
	3	8	512	256							
	4	8	512	256							
	5	8	512	256							
	6	8	512	256							
	7	8	1536	512							
	8	8	1536	512							
	9	8	2047	512							
	10	8	2047	1024							
	11	8	512	256							
	12	8	512	256							

- 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_TFC2, are part of minimum set of TFCS.
- 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 $N \times \text{UL RLC payload size} - 8$ 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, RB6 is dependent on the actual TFRC test point, see the generic test procedure in 14.1.3.5.

18.1.5.17.4 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.

18.1.6 Combinations on DPCH, HS-PDSCH and E-DPDCH

18.1.6.1 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

18.1.6.1.1 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)

18.1.6.1.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.2:

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.

18.1.6.1.3 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	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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 14.1.4.1 is run for each sub-test. Testing of UE supporting UE E-DCH physical layer category 6 shall be performed in accordance to test parameters, sub-tests and test points for UE HS-DSCH physical layer category 6. Testing of UE supporting UE HS-DSCH physical layer category 13 to 15 shall be performed in accordance to test parameters, sub-tests and test points for UE HS-DSCH physical layer category 10.

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 6	5ms, 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.

18.1.6.1.4 Test requirements

See 14.1.4.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU with same content as sent in downlink.

18.1.6.1a 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/ UL 16QAM

18.1.6.1a.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)

18.1.6.1a.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.2:

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.

18.1.6.1a.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
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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 14.1.4.1 is run for each sub-test. Testing of UE supporting UE HS-DSCH physical layer category 13 to 15 shall be performed in accordance to test parameters, sub-tests and test points for UE HS-DSCH physical layer category 10.

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 & 4)	Test data size (note 3)
1	6	5ms, Table 0	8	7992	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 $N \times \text{UL RLC payload size} - 8$ 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.
NOTE 4: The UL RLC SDU size is calculated as $25 \times 320 - 8 = 7992$, such that TB size 8455 corresponding to E-TFCI 103 will be selected. With $PL_{\text{non-max}} = 0.84$, $[(8455 + 24[\text{CRC}]) \times 3 [\text{TC}]] = 25437$ bits. $25437 \times PL_{\text{non-max}} = 21367$, this guarantees as per algorithm in 25.222 clause 4.8.4.1, 16QAM to be selected $[2 \times M_2 + 2 \times M_4]$

18.1.6.1a.4 Test requirements

See 14.1.4.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU with first 312 bits equal to the content of the DL RLC SDU sent by the SS.

18.1.6.1b 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 (MIMO)

18.1.6.1b.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.1b.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.4 for the QPSK, 16QAM and MIMO case using the downlink enhanced Layer 2 configuration with Flexible RLC and MAC-ehs .

18.1.6.1b.3 Method of test

NOTE: The reference to UE Categories refers to the UE capability as signalled in the Rel-8 IE "HS-DSCH physical layer category extension". This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The following parameters are specific for this test case:

Parameter	Value	Comments
Radio bearer	TS 34.108, clause 6.11.5.4.6.4 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs).	

The generic test procedure in 18.1.1.7 is run for each sub-test for test execution 1 and 2.

Execution counter	Downlink Modulation Scheme (M1) MIMO data flow#1	Downlink Modulation Scheme (M2) MIMO data flow#2	MIMO
1	QPSK	QPSK	Yes
2	16QAM	16QAM	Yes
3	16QAM	QPSK	Yes

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 Transmission window size (note 1)	MAC-d PDU size (bits)	Uplink TFCs Under test	Implicitly tested	Restricted UL TFCs (note 2)	UL RLC SDU size (bits) (note 3)
1	25	12	2047	512	Flexible	UL_TFC1	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC5, UL_TFC6	RB5: 312
	26	12	2047	512					
	27	12	2047	512					
2	25	12	1024	1024	Flexible	UL_TFC2	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC2, UL_TFC5, UL_TFC7	RB5: 632
	26	12	1024	1024					
	27	12	1024	1024					
3	25	16	2047	1024	Flexible	UL_TFC3	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC3, UL_TFC5, UL_TFC8	RB5: 952
	26	16	2047	1024					
	27	16	2047	1024					
4	25	16	1024	1024	Flexible	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272
	26	16	1024	1024					
	27	16	1024	1024					

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 TFCs.

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.

18.1.6.1b.4 Test requirements

See 18.1.1.7 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:
The UE shall for each radio bearer return the equal number RLC SDUs as sent by the SS in downlink. If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 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 RLC SDUs where the 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 18.1.1.7 sends either 2 SDU or 8 SDUs depending on the transport block size under tests. 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.

18.1.6.1c 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 (64QAM+MIMO)

18.1.6.1c.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.1c.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.6.4 for the 64QAM and MIMO case using the downlink enhanced Layer 2 configuration with Flexible RLC and MAC-ehs .

18.1.6.1c.3 Method of test

NOTE: The reference to UE Categories refers to the UE capability as signalled in the Rel-8 IE “HS-DSCH physical layer category extension”. This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The following parameters are specific for this test case:

Parameter	Value	Comments
Radio bearer	TS 34.108, clause 6.11.5.4.6.4 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs).	
MAC-ehs 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 18.1.1.7 is run for each sub-test for test execution 1 and 2.

Execution counter	Downlink Modulation Scheme (M1) MIMO data flow#1	Downlink Modulation Scheme (M2) MIMO data flow#2	MIMO
1	64QAM	QPSK	Yes
2	64QAM	16QAM	Yes
3	64QAM	64QAM	Yes

Uplink TFS:

	TF	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	RLC Receiving window size (note 1)	RLC Transmission 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)	Test data size (bits) (note 4)
1	28,29 and 30	2047	1024	Flexible	UL_TFC4	UL_TFC0, UL_TFC5	UL_TFC0, UL_TFC1, UL_TFC4, UL_TFC5, UL_TFC9	RB5: 1272	See note 4

NOTE 1: 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 $N \times \text{UL RLC payload size} - 8$ 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 one complete UL RLC SDU per UL TTI.

NOTE 4: The test data size and number of DL RLC SDUs for RB5 is dependent on the actual TFRC test point, see the generic test procedure in 18.1.1.7.

18.1.6.1c.4 Test requirements

See 18.1.1.7 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE transmitted transport format shall be
 - for sub-test 1: TF4 (4x336)
- At step 18 and for each TFRC test point:
The UE shall for each radio bearer return the equal number RLC SDUs as sent by the SS in downlink. If the downlink RLC SDU size is less than the configured UL RLC SDU for the actual sub-test then the UE shall return 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 RLC SDUs where the 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 18.1.1.7 sends either 2 SDU or 8 SDUs depending on the transport block size under tests.

18.1.6.2 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

18.1.6.2.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.2.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.3:

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.

18.1.6.2.3 Method of test

See 18.1.6.1.3.

18.1.6.2.4 Test requirements

See 18.1.6.1.4.

18.1.6.3 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

18.1.6.3.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.3.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.4:

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.

18.1.6.3.3 Method of test

See 18.1.6.1.3.

18.1.6.3.4 Test requirements

See 18.1.6.1.4.

18.1.6.3a Streaming or interactive or background / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] with Flexible RLC, MAC-ehs and MAC-i/is / 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 with MAC-ehs and MAC-i/is

18.1.6.3a.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.3a.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.3 and for the case when Flexible RLC and MAC-i/is is configured:

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.

18.1.6.3a.3 Method of test

NOTE: The reference to E-DCH Category refers to the UE capability as signalled in the Rel-7 IE “E-DCH physical layer category”. All UEs supporting E-DCH should signal a category between 1 and 6 for this IE even if the UE physical capability category is above 6.

NOTE: The reference to HS-DSCH Categories refers to the UE capability as signalled in the Rel-7 IE “HS-DSCH physical layer category extension”. This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The following parameters are specific for this test case:

Parameter	Value
Radio bearer	TS 34.108, clause 6.11.5.4.7.3 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs) and uplink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-i/is) and using downlink Alt 2 (Fixed RLC and MAC-ehs) and uplink Alt 2 (Fixed RLC and MAC-i/is) for the SRB#1 to SRB#4.
MAC-ehs 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 TFRS (note 1)				
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	TFRI
1	4	512	336	368	1	QPSK	12
2	6	512	336	368	1	QPSK	12
3	8	512	336	368	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	368	1	QPSK	9
8	6	1536	336	368	1	QPSK	9
9	8	1536	336	368	1	QPSK	9
10	4	2047	336	376	1	QPSK	9
11	6	2047	336	376	1	QPSK	9
12	8	2047	336	376	1	QPSK	9
13	4	2560	336	392	1	QPSK	9
14	6	2560	336	392	1	QPSK	9
15	8	2560	336	392	1	QPSK	9
16	4	2047	336	384	1	QPSK	9
17	6	2047	336	384	1	QPSK	9
18	8	2047	336	384	1	QPSK	9
19	4	3072	336	360	1	QPSK	8
20	6	3072	336	360	1	QPSK	8
21	8	3072	336	360	1	QPSK	8
22	4	3584	336	376	1	QPSK	8
23	6	3584	336	376	1	QPSK	8
24	8	3584	336	376	1	QPSK	8

NOTE 1: The HS-PDSCH TFRS should be selected to enable all test data on DTCH on HS-DSCH to be transmitted in one TTI considering all sub-tests. i.e. such that the MAC-ehs transport block size is bigger than the "Minimum TBS" that equals maximum MAC-d PDU size under test + the MAC-ehs header size (24 bits).

The generic test procedure in 18.1.1.6 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 MAC-d PDU size under test	DL MAC-d PDU size under test	UL RLC SDU size (note 2)	Test data size (note 3)
1	1 to 6	5ms	4	Flexible	Flexible	320	320

NOTE 1: E-DCH TTI and E-TFCI table according to TS 25.321 Annex BC.1.
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 UL RLC payload size. This will enable the UE to return the data within one UL TTI ("Use special value of HE field" is configured).
NOTE 3: The test data size is for DTCH mapped to E-DCH is selected according to the MAC-d PDU size to be tested = DL RLC payload size for the MAC-d PDU size.

18.1.6.3a.4 Test requirements

See 14.1.4.1b 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.

18.1.6.4 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

18.1.6.4.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.4.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.5:

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 in combination with the possible TFCI of the conversational speech radio bearer.

18.1.6.4.3 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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 14.1.4.1 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 TFCs (note 2)		
1	1 to 6	5ms, 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 6	5ms, 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
<p>NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.</p> <p>NOTE 2: UL_TFC0, UL_TFC1, UL_TFC2 and UL_TFC3 are part of minimum set of TFCs.</p> <p>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.</p> <p>NOTE 4: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.</p>									

18.1.6.4.4 Test requirements

See 14.1.4.1 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.

18.1.6.5 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

18.1.6.5.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.5.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.7:

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.

18.1.6.5.3 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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 14.1.4.1 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 6	5ms, 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.

18.1.6.5.4 Test requirements

See 14.1.4.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU on RB5 and RB6 with same content as sent in downlink.

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

18.1.6.6.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.6.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.8.

18.1.6.6.3 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

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

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

Downlink TFCS:

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

Sub-tests:

The principle used to select sub-tests has been to cover all downlink Interactive Background and Streaming radio bearer.

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1	1 to 6	5ms, Table 0	4	RB5: 312	RB5: 312
2	DL_TFC2	1 to 6	5ms, Table 0	4	RB5: 632	RB5: 632
3	DL_TFC3	1 to 6	5ms, Table 0	4	RB5: 1912	RB5: 1272
4	DL_TFC4	1 to 6	5ms, Table 0	4	RB5: 2552	RB5: 2552
5	DL_TFC5	1 to 6	5ms, Table 0	4	RB5: 3832	RB5: 3832

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.

18.1.6.6.4 Test requirements

See 14.1.4.1 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.

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

18.1.6.7.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.7.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.9.

18.1.6.7.3 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

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TFI	RB5 (128 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	4x336	N/A
	TF4, bits	8x336	N/A

Downlink TFCS:

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

Sub-tests:

The principle used to select sub-tests has been to cover all downlink Interactive Background and Streaming radio bearer.

Sub-test	Downlink TFC Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1	1 to 6	5ms, Table 0	4	RB5: 312	RB5: 312
2	DL_TFC2	1 to 6	5ms, Table 0	4	RB5: 632	RB5: 632
3	DL_TFC3	1 to 6	5ms, Table 0	4	RB5: 1912	RB5: 1272
4	DL_TFC4	1 to 6	5ms, Table 0	4	RB5: 2552	RB5: 2552
<p>NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.</p> <p>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 $N \times \text{UL RLC payload size} - 8$ 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.</p> <p>NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.</p>						

18.1.6.7.4 Test requirements

See 14.1.4.1 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.

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

18.1.6.8.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.8.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.10.

18.1.6.8.3 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

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TFI	RB5 (64 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A
	TF3, bits	3x336	N/A
	TF4, bits	4x336	N/A

Downlink TFCS:

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

Sub-tests:

The principle used to select sub-tests has been to cover all downlink Interactive Background and Streaming radio bearer.

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1	1 to 6	5ms, Table 0	4	RB5: 312	RB5: 312
2	DL_TFC2	1 to 6	5ms, Table 0	4	RB5: 632	RB5: 632
3	DL_TFC3	1 to 6	5ms, Table 0	4	RB5: 952	RB5: 952
4	DL_TFC4	1 to 6	5ms, Table 0	4	RB5: 1272	RB5: 1272

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.6.8.4 Test requirements

See 14.1.4.1 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.

18.1.6.9 Interactive or background / UL: [max bit rate depending on UE category and TT] DL: 32 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.9.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.9.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause . 6.11.5.4.7.11

18.1.6.9.3 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

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TFI	RB5 (64 kbps, 20ms)	DCCH
TFS	TF0, bits	0x336	0x148
	TF1, bits	1x336	1x148
	TF2, bits	2x336	N/A

Downlink TFCS:

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

Sub-tests:

The principle used to select sub-tests has been to cover all downlink Interactive Background and Streaming radio bearer.

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCl Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1	1 to 6	5ms, Table 0	4	RB5: 312	RB5: 312
2	DL_TFC2	1 to 6	5ms, Table 0	4	RB5: 632	RB5: 632

NOTE 1: E-DPDCH TTI and E-TFCl 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.

18.1.6.9.4 Test requirements

See 14.1.4.1 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.

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

18.1.6.10.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.10.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.12 .

18.1.6.10.3 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

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TFI	RB5 +RB6 (64 kbps, 20ms)	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

Downlink TFCS:

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

Sub-tests:

The principle used to select sub-tests has been to cover all downlink Interactive Background and Streaming radio bearer.

Sub-test	Downlink TFCS Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1	1 to 6	5ms, Table 0	4	RB5: 312	RB5: 312
2	DL_TFC2	1 to 6	5ms, Table 0	4	RB5: 632	RB5: 632
3	DL_TFC3	1 to 6	5ms, Table 0	4	RB5: 952	RB5: 952
4	DL_TFC4	1 to 6	5ms, Table 0	4	RB5: 1272	RB5: 1272

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.

18.1.6.10.4 Test requirements

See 14.1.4.1 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.

18.1.6.11 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 384 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.11.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.11.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.13.

18.1.6.11.3 Method of test

UL parameters:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

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)	RB8 (384 kbps, 10 ms)	DCCH
TFS	TF0, bits	1x0	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF5, TF0)
DL_TFC16	(TF1, TF0, TF0, TF5, TF0)
DL_TFC17	(TF2, TF1, TF1, TF5, TF0)
DL_TFC18	(TF0, TF0, TF0, TF0, TF1)
DL_TFC19	(TF1, TF0, TF0, TF0, TF1)
DL_TFC20	(TF2, TF1, TF1, TF0, TF1)
DL_TFC21	(TF0, TF0, TF0, TF1, TF1)
DL_TFC22	(TF1, TF0, TF0, TF1, TF1)
DL_TFC23	(TF2, TF1, TF1, TF1, TF1)
DL_TFC24	(TF0, TF0, TF0, TF2, TF1)
DL_TFC25	(TF1, TF0, TF0, TF2, TF1)
DL_TFC26	(TF2, TF1, TF1, TF2, TF1)
DL_TFC27	(TF0, TF0, TF0, TF3, TF1)
DL_TFC28	(TF1, TF0, TF0, TF3, TF1)
DL_TFC29	(TF2, TF1, TF1, TF3, TF1)
DL_TFC30	(TF0, TF0, TF0, TF4, TF1)
DL_TFC31	(TF1, TF0, TF0, TF4, TF1)
DL_TFC32	(TF2, TF1, TF1, TF4, TF1)
DL_TFC33	(TF0, TF0, TF0, TF5, TF1)
DL_TFC34	(TF1, TF0, TF0, TF5, TF1)
DL_TFC35	(TF2, TF1, TF1, TF5, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC19	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: No data
2	DL_TFC2, DL_TFC20	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data
3	DL_TFC3, DL_TFC21	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: No data RB6: No data RB7: No data RB8: 312
4	DL_TFC4, DL_TFC22	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312	RB5: 39 RB6: No data RB7: No data RB8: 312
5	DL_TFC5, DL_TFC23	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC24	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 632	RB5: No data RB6: No data RB7: No data RB8: 632
7	DL_TFC7, DL_TFC25	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 632 (note 3)	RB5: 39 RB6: No data RB7: No data RB8: 632
8	DL_TFC8, DL_TFC26	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC27	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272
10	DL_TFC10, DL_TFC28	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272
11	DL_TFC11, DL_TFC29	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272
12	DL_TFC12, DL_TFC30	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: No data RB6: No data RB7: No data RB8: 2552
13	DL_TFC13, DL_TFC31	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 2552	RB5: 39 RB6: No data RB7: No data RB8: 2552
14	DL_TFC14, DL_TFC32	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 2552	RB5: 81 RB6: 103 RB7: 60 RB8: 2552
15	DL_TFC15, DL_TFC33	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 3832	RB5: No data RB6: No data RB7: No data RB8: 3832
16	DL_TFC16, DL_TFC34	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 3832	RB5: 39 RB6: No data RB7: No data RB8: 3832
17	DL_TFC17, DL_TFC35	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 3832	RB5: 81 RB6: 103 RB7: 60 RB8: 3832

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.6.11.4 Test requirements

See 14.1.4.1 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.

18.1.6.12 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.12.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.12.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.14.

18.1.6.12.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	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:

	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

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC16	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312
2	DL_TFC2, DL_TFC17	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC2, UL_TFC3	RB5: 81 RB6: 103 RB7: 60 RB8: 312
3	DL_TFC3, DL_TFC18	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312
4	DL_TFC4, DL_TFC19	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312
5	DL_TFC5, DL_TFC20	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312
6	DL_TFC6, DL_TFC21	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 632
7	DL_TFC7, DL_TFC22	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 632
8	DL_TFC8, DL_TFC23	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 632
9	DL_TFC9, DL_TFC24	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 952
10	DL_TFC10, DL_TFC25	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 952 RB9: 952
11	DL_TFC11, DL_TFC26	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 952
12	DL_TFC12, DL_TFC27	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 1272
13	DL_TFC13, DL_TFC28	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 1272
14	DL_TFC14, DL_TFC29	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 1272

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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.6.12.4 Test requirements

See 14.1.4.1 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.

18.1.6.13 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 64 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 64 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.13.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.13.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.15.

18.1.6.13.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Uplink TFS:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	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:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 + RB9 (64 kbps, 20 ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x340	0x148
	TF1, bits	1x39	1x103	1x60	1x340	1x148
	TF2, bits	1x81	N/A	N/A	2x340	N/A
	TF3, bits	N/A	N/A	N/A	3x340	N/A
	TF4, bits	N/A	N/A	N/A	4x340	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8 + RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC16	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC17	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC18	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
4	DL_TFC4, DL_TFC19	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
5	DL_TFC5, DL_TFC20	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
6	DL_TFC6, DL_TFC21	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: No data
7	DL_TFC7, DL_TFC22	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: 39 RB6: No data RB7: No data RB8: 632 RB9: No data
8	DL_TFC8, DL_TFC23	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 632	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: No data
9	DL_TFC9, DL_TFC24	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: No data RB6: No data RB7: No data RB8: 952 RB9: No data
10	DL_TFC10, DL_TFC25	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: 39 RB6: No data RB7: No data RB8: 952 RB9: No data
11	DL_TFC11, DL_TFC26	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: 952	RB5: 81 RB6: 103 RB7: 60 RB8: 952 RB9: No data
12	DL_TFC12, DL_TFC27	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: No data RB6: No data RB7: No data RB8: 1272 RB9: No data
13	DL_TFC13, DL_TFC28	1 to 6	5ms, Table 0	4	RB5: 39 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 39 RB6: No data RB7: No data RB8: 1272 RB9: No data

14	DL_TFC14, DL_TFC29	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: No data
15	DL_TFC14, DL_TFC29	1 to 6	5ms, Table 0	4	RB5: 81 RB6: 103 RB7: 60 RB8: 1272 RB9: 1272	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 1272
<p>NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.</p> <p>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.</p> <p>NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.</p>						

18.1.6.13.4 Test requirements

See 14.1.4.1 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

18.1.6.14 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL: [max bit rate depending on UE category and TTI] DL: 64 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.14.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.14.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.16.

18.1.6.14.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	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:

	TFI	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (64 kbps s, 20ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3, bits	N/A	N/A	N/A	3x336	N/A	N/A
	TF4, bits	N/A	N/A	N/A	4x336	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9, DCCH)
DL_TFC0	(TF0, TF0, TF0, TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0, TF0, TF0, TF0)
DL_TFC2	(TF2, TF1, TF1, TF0, TF0, TF0)
DL_TFC3	(TF0, TF0, TF0, TF1, TF0, TF0)
DL_TFC4	(TF1, TF0, TF0, TF1, TF0, TF0)
DL_TFC5	(TF2, TF1, TF1, TF1, TF0, TF0)
DL_TFC6	(TF0, TF0, TF0, TF2, TF0, TF0)
DL_TFC7	(TF1, TF0, TF0, TF2, TF0, TF0)
DL_TFC8	(TF2, TF1, TF1, TF2, TF0, TF0)
DL_TFC9	(TF0, TF0, TF0, TF3, TF0, TF0)
DL_TFC10	(TF1, TF0, TF0, TF3, TF0, TF0)
DL_TFC11	(TF2, TF1, TF1, TF3, TF0, TF0)
DL_TFC12	(TF0, TF0, TF0, TF4, TF0, TF0)
DL_TFC13	(TF1, TF0, TF0, TF4, TF0, TF0)
DL_TFC14	(TF2, TF1, TF1, TF4, TF0, TF0)
DL_TFC15	(TF0, TF0, TF0, TF0, TF1, TF0)
DL_TFC16	(TF1, TF0, TF0, TF0, TF1, TF0)
DL_TFC17	(TF2, TF1, TF1, TF0, TF1, TF0)
DL_TFC18	(TF0, TF0, TF0, TF1, TF1, TF0)
DL_TFC19	(TF1, TF0, TF0, TF1, TF1, TF0)
DL_TFC20	(TF2, TF1, TF1, TF1, TF1, TF0)
DL_TFC21	(TF0, TF0, TF0, TF2, TF1, TF0)
DL_TFC22	(TF1, TF0, TF0, TF2, TF1, TF0)
DL_TFC23	(TF2, TF1, TF1, TF2, TF1, TF0)
DL_TFC24	(TF0, TF0, TF0, TF3, TF1, TF0)
DL_TFC25	(TF1, TF0, TF0, TF3, TF1, TF0)
DL_TFC26	(TF2, TF1, TF1, TF3, TF1, TF0)
DL_TFC27	(TF0, TF0, TF0, TF4, TF1, TF0)
DL_TFC28	(TF1, TF0, TF0, TF4, TF1, TF0)
DL_TFC29	(TF2, TF1, TF1, TF4, TF1, TF0)
DL_TFC30	(TF0, TF0, TF0, TF0, TF0, TF1)
DL_TFC31	(TF1, TF0, TF0, TF0, TF0, TF1)
DL_TFC32	(TF2, TF1, TF1, TF0, TF0, TF1)
DL_TFC33	(TF0, TF0, TF0, TF1, TF0, TF1)
DL_TFC34	(TF1, TF0, TF0, TF1, TF0, TF1)
DL_TFC35	(TF2, TF1, TF1, TF1, TF0, TF1)
DL_TFC36	(TF0, TF0, TF0, TF2, TF0, TF1)
DL_TFC37	(TF1, TF0, TF0, TF2, TF0, TF1)
DL_TFC38	(TF2, TF1, TF1, TF2, TF0, TF1)
DL_TFC39	(TF0, TF0, TF0, TF3, TF0, TF1)
DL_TFC40	(TF1, TF0, TF0, TF3, TF0, TF1)
DL_TFC41	(TF2, TF1, TF1, TF3, TF0, TF1)
DL_TFC42	(TF0, TF0, TF0, TF4, TF0, TF1)
DL_TFC43	(TF1, TF0, TF0, TF4, TF0, TF1)
DL_TFC44	(TF2, TF1, TF1, TF4, TF0, TF1)
DL_TFC45	(TF0, TF0, TF0, TF0, TF1, TF1)
DL_TFC46	(TF1, TF0, TF0, TF0, TF1, TF1)
DL_TFC47	(TF2, TF1, TF1, TF0, TF1, TF1)
DL_TFC48	(TF0, TF0, TF0, TF1, TF1, TF1)
DL_TFC49	(TF1, TF0, TF0, TF1, TF1, TF1)
DL_TFC50	(TF2, TF1, TF1, TF1, TF1, TF1)
DL_TFC51	(TF0, TF0, TF0, TF2, TF1, TF1)
DL_TFC52	(TF1, TF0, TF0, TF2, TF1, TF1)
DL_TFC53	(TF2, TF1, TF1, TF2, TF1, TF1)
DL_TFC54	(TF0, TF0, TF0, TF3, TF1, TF1)
DL_TFC55	(TF1, TF0, TF0, TF3, TF1, TF1)
DL_TFC56	(TF2, TF1, TF1, TF3, TF1, TF1)
DL_TFC57	(TF0, TF0, TF0, TF4, TF1, TF1)
DL_TFC58	(TF1, TF0, TF0, TF4, TF1, TF1)
DL_TFC59	(TF2, TF1, TF1, TF4, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC31	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
2	DL_TFC2, DL_TFC32	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC2, UL_TFC3	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
3	DL_TFC3, DL_TFC33	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
4	DL_TFC4, DL_TFC34	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
5	DL_TFC5, DL_TFC35	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
6	DL_TFC6, DL_TFC36	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
7	DL_TFC7, DL_TFC37	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
8	DL_TFC8, DL_TFC38	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
9	DL_TFC9, DL_TFC39	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
10	DL_TFC10, DL_TFC40	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
11	DL_TFC11, DL_TFC41	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
12	DL_TFC12, DL_TFC42	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
13	DL_TFC13, DL_TFC43	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312

14	DL_TFC14, DL_TFC44	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 632 RB9: 312
15	DL_TFC15, DL_TFC45	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
16	DL_TFC16, DL_TFC46	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
17	DL_TFC17, DL_TFC47	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
18	DL_TFC18, DL_TFC48	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
19	DL_TFC19, DL_TFC49	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
20	DL_TFC20, DL_TFC50	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
21	DL_TFC21, DL_TFC51	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
22	DL_TFC22, DL_TFC52	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
23	DL_TFC23, DL_TFC53	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
24	DL_TFC24, DL_TFC54	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
25	DL_TFC25, DL_TFC55	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
26	DL_TFC26, DL_TFC56	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
27	DL_TFC27, DL_TFC57	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312
28	DL_TFC28, DL_TFC58	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: 103 RB7: 60 RB8: 312 RB9: 312

29	DL_TFC29, DL_TFC59	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
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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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.6.14.4 Test requirements

See 14.1.4.1 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.

18.1.6.15 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL: [max bit rate depending on UE category and TTI] DL: 32 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.15.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.15.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.17.

18.1.6.15.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	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:

	TFI	RB5 (RA B subf low #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (32 kbps s, 40ms TTI)	RB9 (8kbps, 40ms TTI)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A
	TF3,its	N/A	N/A	N/A	3x336	N/A	N/A
	TF4,its	N/A	N/A	N/A	4x336	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9 DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF1,TF0,TF0,TF0)
DL_TFC3	(TF0,TF0,TF0,TF1,TF0,TF0)
DL_TFC4	(TF1,TF0,TF0,TF1,TF0,TF0)
DL_TFC5	(TF2,TF1,TF1,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF2,TF0,TF0)
DL_TFC7	(TF1,TF0,TF0,TF2,TF0,TF0)
DL_TFC8	(TF2,TF1,TF1,TF2,TF0,TF0)
DL_TFC9	(TF0,TF0,TF0,TF0,TF1,TF0)
DL_TFC10	(TF1,TF0,TF0,TF0,TF1,TF0)
DL_TFC11	(TF2,TF1,TF1,TF0,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF1,TF1,TF0)
DL_TFC13	(TF1,TF0,TF0,TF1,TF1,TF0)
DL_TFC14	(TF2,TF1,TF1,TF1,TF1,TF0)
DL_TFC15	(TF0,TF0,TF0,TF2,TF1,TF0)
DL_TFC16	(TF1,TF0,TF0,TF2,TF1,TF0)
DL_TFC17	(TF2,TF1,TF1,TF2,TF1,TF0)
DL_TFC18	(TF0,TF0,TF0,TF0,TF0,TF1)
DL_TFC19	(TF1,TF0,TF0,TF0,TF0,TF1)
DL_TFC20	(TF2,TF1,TF1,TF0,TF0,TF1)
DL_TFC21	(TF0,TF0,TF0,TF1,TF0,TF1)
DL_TFC22	(TF1,TF0,TF0,TF1,TF0,TF1)
DL_TFC23	(TF2,TF1,TF1,TF1,TF0,TF1)
DL_TFC24	(TF0,TF0,TF0,TF2,TF0,TF1)
DL_TFC25	(TF1,TF0,TF0,TF2,TF0,TF1)
DL_TFC26	(TF2,TF1,TF1,TF2,TF0,TF1)
DL_TFC27	(TF0,TF0,TF0,TF0,TF1,TF1)
DL_TFC28	(TF1,TF0,TF0,TF0,TF1,TF1)
DL_TFC29	(TF2,TF1,TF1,TF0,TF1,TF1)
DL_TFC30	(TF0,TF0,TF0,TF1,TF1,TF1)
DL_TFC31	(TF1,TF0,TF0,TF1,TF1,TF1)
DL_TFC32	(TF2,TF1,TF1,TF1,TF1,TF1)
DL_TFC33	(TF0,TF0,TF0,TF2,TF1,TF1)
DL_TFC34	(TF1,TF0,TF0,TF2,TF1,TF1)
DL_TFC35	(TF2,TF1,TF1,TF2,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC18	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC19	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC2, UL_TFC3	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC20	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
4	DL_TFC4, DL_TFC21	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
5	DL_TFC5, DL_TFC22	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
6	DL_TFC6, DL_TFC23	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
7	DL_TFC7, DL_TFC24	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
8	DL_TFC8, DL_TFC25	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
9	DL_TFC9, DL_TFC26	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312
10	DL_TFC10, DL_TFC27	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312
11	DL_TFC11, DL_TFC28	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312
12	DL_TFC12, DL_TFC29	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312
13	DL_TFC13, DL_TFC30	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312

14	DL_TFC14, DL_TFC31	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
15	DL_TFC15, DL_TFC32	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312
16	DL_TFC16, DL_TFC33	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312
17	DL_TFC17, DL_TFC35	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
<p>NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.</p> <p>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 $N \times \text{UL RLC payload size} - 8$ 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.</p> <p>NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.</p>						

18.1.6.15.4 Test requirements

See 14.1.4.1 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

18.1.6.16 Conversational / speech / UL:12.2 DL:12.2 kbps / CS RAB + Streaming / UL: [max bit rate depending on UE category and TTI] DL: 16 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.16.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.16.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.18.

18.1.6.16.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Uplink TFS:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	DCCH
TFS	TF0, bits	0x81	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:

	TF	RB5 (RAB subflow #1)	RB6 (RAB subflow #2)	RB7 (RAB subflow #3)	RB8 (16 kbps tti 40ms)	RB9 (8 kbps tti 40ms)	DCCH
TFS	TF0, bits	0x81	0x103	0x60	0x336	0x336	0x148
	TF1, bits	1x39	1x103	1x60	1x336	1x336	1x148
	TF2, bits	1x81	N/A	N/A	2x336	N/A	N/A

Downlink TFCS:

TFCI	(RB5, RB6, RB7, RB8, RB9 DCCH)
DL_TFC0	(TF0,TF0,TF0,TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0,TF0,TF0,TF0)
DL_TFC2	(TF2,TF1,TF1,TF0,TF0,TF0)
DL_TFC3	(TF0,TF0,TF0,TF1,TF0,TF0)
DL_TFC4	(TF1,TF0,TF0,TF1,TF0,TF0)
DL_TFC5	(TF2,TF1,TF1,TF1,TF0,TF0)
DL_TFC6	(TF0,TF0,TF0,TF2,TF0,TF0)
DL_TFC7	(TF1,TF0,TF0,TF2,TF0,TF0)
DL_TFC8	(TF2,TF1,TF1,TF2,TF0,TF0)
DL_TFC9	(TF0,TF0,TF0,TF0,TF1,TF0)
DL_TFC10	(TF1,TF0,TF0,TF0,TF1,TF0)
DL_TFC11	(TF2,TF1,TF1,TF0,TF1,TF0)
DL_TFC12	(TF0,TF0,TF0,TF1,TF1,TF0)
DL_TFC13	(TF1,TF0,TF0,TF1,TF1,TF0)
DL_TFC14	(TF2,TF1,TF1,TF1,TF1,TF0)
DL_TFC15	(TF0,TF0,TF0,TF2,TF1,TF0)
DL_TFC16	(TF1,TF0,TF0,TF2,TF1,TF0)
DL_TFC17	(TF2,TF1,TF1,TF2,TF1,TF0)
DL_TFC18	(TF0,TF0,TF0,TF0,TF0,TF1)
DL_TFC19	(TF1,TF0,TF0,TF0,TF0,TF1)
DL_TFC20	(TF2,TF1,TF1,TF0,TF0,TF1)
DL_TFC21	(TF0,TF0,TF0,TF1,TF0,TF1)
DL_TFC22	(TF1,TF0,TF0,TF1,TF0,TF1)
DL_TFC23	(TF2,TF1,TF1,TF1,TF0,TF1)
DL_TFC24	(TF0,TF0,TF0,TF2,TF0,TF1)
DL_TFC25	(TF1,TF0,TF0,TF2,TF0,TF1)
DL_TFC26	(TF2,TF1,TF1,TF2,TF0,TF1)
DL_TFC27	(TF0,TF0,TF0,TF0,TF1,TF1)
DL_TFC28	(TF1,TF0,TF0,TF0,TF1,TF1)
DL_TFC29	(TF2,TF1,TF1,TF0,TF1,TF1)
DL_TFC30	(TF0,TF0,TF0,TF1,TF1,TF1)
DL_TFC31	(TF1,TF0,TF0,TF1,TF1,TF1)
DL_TFC32	(TF2,TF1,TF1,TF1,TF1,TF1)
DL_TFC33	(TF0,TF0,TF0,TF2,TF1,TF1)
DL_TFC34	(TF1,TF0,TF0,TF2,TF1,TF1)
DL_TFC35	(TF2,TF1,TF1,TF2,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC18	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: No data
2	DL_TFC2, DL_TFC19	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC2, UL_TFC3	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: No data
3	DL_TFC3, DL_TFC20	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
4	DL_TFC4, DL_TFC21	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
5	DL_TFC5, DL_TFC22	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
6	DL_TFC6, DL_TFC23	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: No data
7	DL_TFC7, DL_TFC24	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: No data
8	DL_TFC8, DL_TFC25	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: No data
9	DL_TFC9, DL_TFC26	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: No data RB9: 312
10	DL_TFC10, DL_TFC27	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: No data RB9: 312
11	DL_TFC11, DL_TFC28	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: No data RB9: 312
12	DL_TFC12, DL_TFC29	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 312 RB9: 312
13	DL_TFC13, DL_TFC30	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC1, UL_TFC3	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312

14	DL_TFC14, DL_TFC31	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
15	DL_TFC15, DL_TFC32	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3	RB5: No data RB6: No data RB7: No data RB8: 632 RB9: 312
16	DL_TFC16, DL_TFC33	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC1	RB5: 39 RB6: No data RB7: No data RB8: 312 RB9: 312
17	DL_TFC17, DL_TFC35	1 to 6	5ms, Table 0	4	UL_TFC0, UL_TFC3, UL_TFC5	RB5: 81 RB6: 103 RB7: 60 RB8: 312 RB9: 312
<p>NOTE 1: E-DPDCH TTI and E-TFCI table according to TS 25.321 Annex B.</p> <p>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 $N \times \text{UL RLC payload size} - 8$ 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.</p> <p>NOTE 3: The test data size is for DTCH mapped to E-DCH selected according to the MAC-d PDU size to be tested.</p>						

18.1.6.16.4 Test requirements

See 14.1.4.1 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.

18.1.6.17 Streaming / UL: [max bit rate depending on UE category and TTI] DL: 64 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.17.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.17.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.19.

18.1.6.17.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TF	RB5 (64 kbps TTI 40ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x656	0x336	0x148
	TF1, bits	1x656	1x336	1x148
	TF2, bits	2x656	N/A	N/A
	TF3, bits	4x656	N/A	N/A

Downlink TFCS:

TFCI	(RB5,RB6 DCCH)
DL_TFC0	(TF0,TF0,TF0)
DL_TFC1	(TF1,TF0,TF0)
DL_TFC2	(TF2,TF0,TF0)
DL_TFC3	(TF3,TF0,TF0)
DL_TFC4	(TF0,TF1,TF0)
DL_TFC5	(TF2,TF1,TF0)
DL_TFC6	(TF2,TF1,TF0)
DL_TFC7	(TF3,TF1,TF0),
DL_TFC8	(TF0,TF0,TF1)
DL_TFC9	(TF1,TF0,TF1)
DL_TFC10	(TF2,TF0,TF1)
DL_TFC11	(TF3,TF0,TF1)
DL_TFC12	(TF0,TF1,TF1)
DL_TFC13	(TF1,TF1,TF1)
DL_TFC14	(TF2,TF1,TF1),
DL_TFC15	(TF3,TF1,TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC9	1 to 6	5ms, Table 0	4	RB5: 640 RB6: No data	RB5: 640 RB6: No data
2	DL_TFC2, DL_TFC10	1 to 6	5ms, Table 0	4	RB5: 1296 RB6: No data	RB5: 1296 RB6: No data
3	DL_TFC3, DL_TFC11	1 to 6	5ms, Table 0	4	RB5: 2608 RB6: No data	RB5: 2608 RB6: No data
4	DL_TFC4, DL_TFC12	1 to 6	5ms, Table 0	4	RB5: No data RB6: 312	RB5: No data RB6: 312
5	DL_TFC13	1 to 6	5ms, Table 0	4	RB5: 640 RB6: 312	RB5: 640 RB6: 312
6	DL_TFC6	1 to 6	5ms, Table 0	4	RB5: 1296 RB6: 312	RB5: 1296 RB6: 312
7	DL_TFC7	1 to 6	5ms, Table 0	4	RB5: 2608 RB6: 312	RB5: 2608 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.

18.1.6.17.4 Test requirements

See 14.1.4.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU with same content as sent in downlink

18.1.6.18 Streaming / UL: [max bit rate depending on UE category and TTI] DL: 32 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.18.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.18.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.20.

18.1.6.18.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TFI	RB5 (32 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148
	TF2, bits	2x336	N/A	N/A

Downlink TFCS:

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

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC7	1 to 6	5ms, Table 0	4	RB5: 312 RB6: No data	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC8	1 to 6	5ms, Table 0	4	RB5: 312 RB6: No data	RB5: 632 RB6: No data
3	DL_TFC3, DL_TFC9	1 to 6	5ms, Table 0	4	RB5: No data RB6: 312	RB5: No data RB6: 312
4	DL_TFC4, DL_TFC11	1 to 6	5ms, Table 0	4	RB5: 312 RB6: 312	RB5: 612 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.						

18.1.6.18.4 Test requirements

See 14.1.4.1 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

18.1.6.19 Streaming / UL: [max bit rate depending on UE category and TTI] DL: 16 kbps / PS RAB + Interactive or background / UL: [max bit rate depending on UE category and TTI] DL: 8 kbps / PS RAB + UL:3.4 DL:3.4 kbps SRBs for DCCH

18.1.6.19.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.19.2 Test purpose

To verify radio bearer establishment and correct data transfer for reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.21.

18.1.6.19.3 Method of test

UL parameters for E-DCH:

E-DCH Category	RLC Transmission window size
1	512
2	512
3	512
4	512
5	1536
6	1536

Downlink TFS:

	TF	RB5 (16 kbps TTI 20ms)	RB6 (8 kbps TTI 40ms)	DCCH
TFS	TF0, bits	0x336	0x336	0x148
	TF1, bits	1x336	1x336	1x148

Downlink TFCS:

TFCI	(RB5, RB6 DCCH)
DL_TFC0	(TF0, TF0, TF0)
DL_TFC1	(TF1, TF0, TF0)
DL_TFC2	(TF0, TF1, TF0)
DL_TFC3	(TF1, TF1, TF0)
DL_TFC4	(TF0, TF0, TF1)
DL_TFC5	(TF1, TF0, TF1)
DL_TFC6	(TF0, TF1, TF1)
DL_TFC7	(TF1, TF1, TF1)

Sub-tests:

Sub-test	Downlink TFCs Under test	Applicable E-DCH Category	E-DPDCH TTI and E-TFCI Table (note 1)	E-DPDCH Number of HARQ processes	UL RLC SDU size (bits) (note 2)	Test data size (bits) (note 3)
1	DL_TFC1, DL_TFC5	1 to 6	5ms, Table 0	4	RB5: 312 RB6: No data	RB5: 312 RB6: No data
2	DL_TFC2, DL_TFC6	1 to 6	5ms, Table 0	4	RB5: No data RB6: 312	RB5: No data RB6: 312
3	DL_TFC3, DL_TFC7	1 to 6	5ms, 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 $N \times \text{UL RLC payload size} - 8$ 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.

18.1.6.19.4 Test requirements

See 14.1.4.1 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

18.1.6.20 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 for enhanced uplink/downlink in CELL_FACH

18.1.6.20.1 Conformance requirement

Conformance requirement

See 18.1.6.1

18.1.6.20.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.4:

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 common E-DCH in CELL_FACH.

18.1.6.20.3 Method of test

NOTE 1: The reference to E-DCH Category refers to the UE capability as signalled in the Rel-7 IE "E-DCH physical layer category". All UEs supporting E-DCH should signal a category between 1 and 6 for this IE even if the UE physical capability category is above 6.

NOTE 2: The reference to HS-DSCH Categories refers to the UE capability as signalled in the Rel-7 IE "HS-DSCH physical layer category extension". This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The following parameters are specific for this test case:

Parameter	Value
Radio bearer	TS 34.108, clause 6.11.5.4.7.4 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs) and uplink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-i/is) and using downlink Alt 2 (Fixed RLC and MAC-ehs) and uplink Alt 2 (Fixed RLC and MAC-i/is) for the SRB#1 to SRB#4.
MAC-ehs 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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 18.1.1.9 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 MAC-d PDU size under test	DL MAC-d PDU size under test	UL RLC SDU size (note 2)	Test data size (note 3)
1	1 to 6	5ms	4	Flexible	Flexible	320	320

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 UL RLC payload size. This will enable the UE to return the data within one UL TTI ("Use special value of HE field" is configured).
NOTE 3: The test data size is for DTCH mapped to E-DCH is selected according to the MAC-d PDU size to be tested = DL RLC payload size for the MAC-d PDU size.

18.1.6.20.4 Test requirements

See 14.1.5.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU with same content as sent in downlink.

18.1.6.20a 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 common E-DCH and HS-DSCH for enhanced CELL_FACH with DRX configured

18.1.6.20a.1 Conformance requirement

Conformance requirement

See 18.1.6.1

18.1.6.20a.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.4:

1. To verify that the UE is able to establish the radio bearer combination.
2. To verify correct data transfer corresponding to Enhanced DRX reception pattern by UE when transport channel is mapped to common E-DCH in CELL_FACH.

18.1.6.20a.3 Method of test

NOTE: The reference to E-DCH Category refers to the UE capability as signalled in the Rel-6 IE "E-DCH physical layer category". All UEs supporting E-DCH should signal a category between 1 and 6 for this IE even if the UE physical capability category is above 6.

NOTE: The reference to HS-DSCH Categories refers to the UE capability as signalled in the Rel-7 IE "HS-DSCH physical layer category extension". This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The following parameters are specific for this test case:

Parameter	Value
Radio bearer	TS 34.108, clause 6.11.5.4.7.4 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs) and uplink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-i/is) and using downlink Alt 2 (Fixed RLC and MAC-ehs) and uplink Alt 2 (Fixed RLC and MAC-i/is) for the SRB#1 to SRB#4.
MAC-ehs 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	TFRI
1	4	512	336	370	1	QPSK	12
2	6	512	336	370	1	QPSK	12
3	8	512	336	370	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	358	1	QPSK	8
8	6	1536	336	358	1	QPSK	8
9	8	2047	336	358	1	QPSK	8
10	4	2047	336	370	1	QPSK	8
11	6	1024	336	370	1	QPSK	8
12	8	1024	336	370	1	QPSK	8

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 14.1.3.3 (MAC-d PDU size=336) for recommended TFRC values for different transport block size.

The generic test procedure in 18.1.1.9 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 MAC-d PDU size under test	DL MAC-d PDU size under test	UL RLC SDU size (note 2)	Test data size (note 3)
1	1 to 6	5ms	4	Flexible	Flexible	320	320
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 UL RLC payload size. This will enable the UE to return the data within one UL TTI ("Use special value of HE field" is configured). NOTE 3: The test data size is for DTCH mapped to E-DCH is selected according to the MAC-d PDU size to be tested = DL RLC payload size for the MAC-d PDU 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 for common E-DCH and HS-DSCH reception in CELL_FACH, with the following exceptions

Information Element	Value/remark
HS-DSCH DRX in CELL_FACH Information 1.28 Mcps TDD	
-T321	200ms
- DRX cycle _{FACH}	4
- Rx burst _{FACH}	1

18.1.6.20a.4 Test requirements

See 14.1.5.1 for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU with same content as sent in downlink.

18.1.6.21 Conversational / unknown or speech / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps with Flexible RLC and MAC-ehs / 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] with Fixed RLC and MAC-ehs / 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 SRBs with Fixed RLC and MAC-ehs on HS-DSCH / UL: QPSK and DL: QPSK

18.1.6.21.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.21.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.22 for the case for the QPSK and non-MIMO case using the downlink enhanced Layer 2 configuration with MAC-ehs and Fixed and Flexible RLC configured:

- To verify that the UE is able to establish the radio bearer combination.
- To verify correct data transfer using all the possible MAC-d PDU sizes of the transport channel mapped to E-DCH.

18.1.6.21.3 Method of test

NOTE: The reference to E-DCH Category refers to the UE capability as signalled in the Rel-6 IE “E-DCH physical layer category”. All UEs supporting E-DCH should signal a category between 1 and 6 for this IE even if the UE physical capability category is above 6.

NOTE: The reference to HS-DSCH Categories refers to the UE capability as signalled in the Rel-7 IE “HS-DSCH physical layer category extension”. This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The Conversational / unknown or speech / 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 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
Radio bearer	TS 34.108, clause 6.11.5.4.7.22 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs) for RB5; using downlink MAC-d flow parameters according to Alt 2 (Fixed RLC and MAC-ehs) for RB6; and using Alt 2 (Fixed RLC and MAC-ehs) for the SRB#1 to SRB#4.
MAC-ehs receiver window size	16
Alternative E-bit interpretation	TRUE
RB5: HS-DSCH MAC-d PDU size	See sub-test table
RB6: HS-DSCH MAC-d PDU size	336
RB5: DL UM RLC LI size	7

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)				TFRI
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	
1	4	512	336	368	1	QPSK	12
2	6	512	336	368	1	QPSK	12
3	8	512	336	368	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	368	1	QPSK	9
8	6	1536	336	368	1	QPSK	9
9	8	1536	336	368	1	QPSK	9
10	4	2047	336	376	1	QPSK	9
11	6	2047	336	376	1	QPSK	9
12	8	2047	336	376	1	QPSK	9
13	4	2560	336	392	1	QPSK	9
14	6	2560	336	392	1	QPSK	9
15	8	2560	336	392	1	QPSK	9
16	4	2047	336	384	1	QPSK	9
17	6	2047	336	384	1	QPSK	9
18	8	2047	336	384	1	QPSK	9
19	4	3072	336	360	1	QPSK	8
20	6	3072	336	360	1	QPSK	8
21	8	3072	336	360	1	QPSK	8
22	4	3584	336	376	1	QPSK	8
23	6	3584	336	376	1	QPSK	8
24	8	3584	336	376	1	QPSK	8

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 considering all sub-tests. i.e. such that the MAC-ehs transport block size is bigger than the "Minimum TBS" that equals maximum MAC-d PDU size under test + the MAC-ehs header size (24 bits).

The generic test procedure in 18.1.1.6 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 MAC-d PDU size under test	DL MAC-d PDU size under test	UL RLC SDU size (note 2)	Test data size (note 3)
1	1 to 6	5ms	4	RB5:96 RB6:336	RB5:Flexible RB6:336	RB5:80 RB6:312	RB5:96 RB6:312
2	1 to 6	5ms	4	RB5:112 RB6:336	RB5:Flexible RB6:336	RB5:96 RB6:312	RB5:96 RB6:312
3	1 to 6	5ms	4	RB5:144 RB6:336	RB5:Flexible RB6:336	RB5:128 RB6:312	RB5:128 RB6:312
4	1 to 6	5ms	4	RB5:160 RB6:336	RB5:Flexible RB6:336	RB5:144 RB6:312	RB5:144 RB6:312
5	1 to 6	5ms	4	RB5:176 RB6:336	RB5:Flexible RB6:336	RB5:160 RB6:312	RB5:160 RB6:312
6	1 to 6	5ms	4	RB5:192 RB6:336	RB5:Flexible RB6:336	RB5:176 RB6:312	RB5:176 RB6:312
7	1 to 6	5ms	4	RB5:208 RB6:336	RB5:Flexible RB6:336	RB5:192 RB6:312	RB5:208 RB6:312
8	1 to 6	5ms	4	RB5:224 RB6:336	RB5:Flexible RB6:336	RB5:208 RB6:312	RB5:208 RB6:312
9	1 to 6	5ms	4	RB5:288 RB6:336	RB5:Flexible RB6:336	RB5:272 RB6:312	RB5:280 RB6:312
10	1 to 6	5ms	4	RB5:296 RB6:336	RB5:Flexible RB6:336	RB5:280 RB6:312	RB5:280 RB6:312
11	1 to 6	5ms	4	RB5:312 RB6:336	RB5:Flexible RB6:336	RB5:296 RB6:312	RB5:328 RB6:312
12	1 to 6	5ms	4	RB5:344 RB6:336	RB5:Flexible RB6:336	RB5:328 RB6:312	RB5:328 RB6:312

NOTE 1: E-DCH TTI and E-TFCI table according to TS 25.321 Annex BC.1.

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 UL RLC payload size minus 8 bits (size of 7 bit length indicator and expansion bit). 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 is selected according to the MAC-d PDU size to be tested = DL RLC payload size for the MAC-d PDU size minus 8 bits (size of 7 bit length indicator and expansion bit).

18.1.6.21.4 Test requirements

See 14.1.4.1a for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU on RB5 and RB6 with same content as sent in downlink. For the case the returned UL RLC SDU size under test is smaller than the sent DL RLC SDU size then the payload of the received UL RLC SDU shall have the same content as the first N bits of the DL RLC SDU payload, where N equals the payload size of the UL RLC SDU.

18.1.6.22 Conversational / unknown or speech / UL: [max bit rate depending on UE category and TTI] DL: [max bit rate depending on UE category] kbps with Flexible RLC, MAC-ehs and MAC-i/is / 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] with Fixed RLC, MAC-ehs and MAC-i/is / 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 with MAC-ehs and MAC-i/is / UL: QPSK and DL: QPSK

18.1.6.22.1 Conformance requirement

See 18.1.6.1.1.

18.1.6.22.2 Test purpose

For the reference radio bearer configuration as specified in TS 34.108, clause 6.11.5.4.7.22 for the case QPSK and non-MIMO case when MAC-ehs and MAC-i/is and the mix of Fixed and Flexible RLC is configured:

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.

18.1.6.22.3 Method of test

NOTE: The reference to E-DCH Category refers to the UE capability as signalled in the Rel-6 IE “E-DCH physical layer category”. All UEs supporting E-DCH should signal a category between 1 and 6 for this IE even if the UE physical capability category is above 6.

NOTE: The reference to HS-DSCH Categories refers to the UE capability as signalled in the Rel-7 IE “HS-DSCH physical layer category extension”. This IE corresponds to the HS-DSCH category supported by the UE when MAC-ehs is configured.

The Conversational / unknown or speech / 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 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
Radio bearer	TS 34.108, clause 6.11.5.4.7.22 using downlink MAC-d flow parameters according to Alt 3 (Flexible RLC and MAC-ehs) and uplink MAC-d flow parameters according to Alt 2 (Flexible RLC and MAC-i/is) for RB5; using downlink MAC-d flow parameters according to Alt 2 (Fixed RLC and MAC-ehs) and uplink MAC-d flow parameters according to Alt 2 (Fixed RLC and MAC-i/is) for RB6; and using downlink Alt 2 (Fixed RLC and MAC-ehs) and uplink Alt 2 (Fixed RLC and MAC-i/is) for the SRB#1 to SRB#4.
MAC-ehs receiver window size	16
RB5: Alternative E-bit interpretation	TRUE
RB5: HS-DSCH MAC-d PDU size	See sub-test table
RB6: 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)				TFRI
			Max MAC-d PDU size	Minimum TBS	Number of MAC-d PDUs	Modulation scheme	
1	4	512	336	368	1	QPSK	12
2	6	512	336	368	1	QPSK	12
3	8	512	336	368	1	QPSK	12
4	4	512	336	360	1	QPSK	9
5	6	512	336	360	1	QPSK	9
6	8	512	336	360	1	QPSK	9
7	4	1536	336	368	1	QPSK	9
8	6	1536	336	368	1	QPSK	9
9	8	1536	336	368	1	QPSK	9
10	4	2047	336	376	1	QPSK	9
11	6	2047	336	376	1	QPSK	9
12	8	2047	336	376	1	QPSK	9
13	4	2560	336	392	1	QPSK	9
14	6	2560	336	392	1	QPSK	9
15	8	2560	336	392	1	QPSK	9
16	4	2047	336	384	1	QPSK	9
17	6	2047	336	384	1	QPSK	9
18	8	2047	336	384	1	QPSK	9
19	4	3072	336	360	1	QPSK	8
20	6	3072	336	360	1	QPSK	8
21	8	3072	336	360	1	QPSK	8
22	4	3584	336	376	1	QPSK	8
23	6	3584	336	376	1	QPSK	8
24	8	3584	336	376	1	QPSK	8

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 considering all sub-tests. i.e. such that the MAC-ehs transport block size is bigger than the "Minimum TBS" that equals maximum MAC-d PDU size under test + the MAC-ehs header size (24 bits).

The generic test procedure in 18.1.1.6 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 MAC-d PDU size under test	DL MAC-d PDU size under test	UL RLC SDU size (note 2)	Test data size (note 3)
1	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:88 RB6:320	RB5:104 RB6:320
2	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:104 RB6:320	RB5:104 RB6:320
3	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:136 RB6:320	RB5:136 RB6:320
4	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:152 RB6:320	RB5:152 RB6:320
5	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:168 RB6:320	RB5:168 RB6:320
6	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:184 RB6:320	RB5:184 RB6:320
7	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:200 RB6:320	RB5:216 RB6:320
8	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:216 RB6:320	RB5:216 RB6:320
9	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:280 RB6:320	RB5:288 RB6:320
10	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:288 RB6:320	RB5:288 RB6:320
11	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:304 RB6:320	RB5:336 RB6:320
12	1 to 6	5ms	4	RB5:Flexible RB6:336	RB5:Flexible RB6:336	RB5:336 RB6:320	RB5:336 RB6:320

NOTE 1: E-DCH TTI and E-TFCI table according to TS 25.321 Annex BC.1.

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 UL RLC payload size to be tested.. This will enable the UE to return the data within one UL TTI ("Alternative E-bit interpretation" is configured for RB5 (UM) and "Use special value of HE field" is configured for RB6 (AM)). The selected UL RLC SDU sizes for the flexible case (RB5) are the same as specified for the UL fixed case (Alt 1) of the reference radio bearer configuration in TS 34.108, clause 6.11.5.4.7.22 (88, 104, 136, 152, 168, 184, 200, 216, 280, 288, 304 and 336).

NOTE 3: The test data size is for DTCH mapped to E-DCH is selected according to the MAC-d PDU size to be tested = DL RLC payload size for the MAC-d PDU size. The selected DL test data sizes for RB5 are the same as specified for the DL fixed case (Alt 2) of the reference radio bearer configuration in TS 34.108, clause 6.11.5.4.7.22 (104, 136, 152, 168, 184, 216, 288 and 336).

18.1.6.22.4 Test requirements

See 14.1.4.1b for definition of step 12 and step 18.

- At step 12 the UE shall send RADIO BEARER SETUP COMPLETE.
- At step 18 the UE shall return a RLC SDU on RB5 and RB6 with same content as sent in downlink. For the case the returned UL RLC SDU size under test is smaller than the sent DL RLC SDU size then the payload of the received UL RLC SDU shall have the same content as the first N bits of the DL RLC SDU payload, where N equals the payload size of the UL RLC SDU.