

## Appendix C. Conducted Power Test Results

### 1. Conducted power test results

For the measurements, Radio Communication Tester was used.

Note: The Radio Communication Tester measures GSM peak and average output power for active timeslots. For SAR the time-based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

No. of timeslots	1	2	3	4
Duty Cycle	1:8.3	1:4.1	1:2.77	1:2.08
Time-based avg. power compared to slotted avg. power	-9.19dB	-6.13dB	-4.42dB	-3.18dB

The signalling modes differ as follows:

mode	coding scheme	modulation
GPRS	CS1 to CS4	GMSK
EDGE	MCS1 to MCS4	GMSK
EDGE	MCS5 to MCS9	8PSK

Apart from modulation change (GMSK/8PSK) coding schemes differ in code rate without influence on the RF signal. Therefore, one coding scheme per mode was selected for conducted power measurements.

The Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

The Radio Communication Tester measures LTE TDD peak and average output power for active timeslots. LTE TDD peak and average output power for active timeslots. For SAR the time-based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

No. of Configuration	0	1	2	3	4	5	6
Duty Cycle	<b>0.6333</b>	0.4333	0.2333	0.3167	0.2167	0.1167	0.5333
Time-based avg. power compared to slotted avg. power	<b>-1.98dB</b>	-3.63dB	-6.32dB	-4.99dB	-6.64dB	-9.33 dB	-2.73dB

Note: According to duty cycle of configuration 0 to 6, Max output power should be Configuration 0, so we just tested the conduction power and SAR of configuration 0.

For conducted power measurements of downlink LTE CA, the following conducted power measurement results of downlink LTE carrier aggregation are provided to quantify downlink only carrier aggregation SAR



test exclusion per KDB 941225 D05A.

Power test equipment: R&S Radio Communication Tester CMW500 and/or Anritsu Radio Communication Analyzer MT8821C were used.

For conducted power measurements of uplink LTE CA, the Intra-band uplink LTE CA measurement (Uplink CA\_7C, CA\_38C, CA\_41C), the following procedure is applied:

Maximum output power is measured for each UL CA configuration for the required test channels :

- UL PCC configuration is determined by the required test channel
- SCC and subsequent CCs are added alternatively to either side of the PCC or within the transmission band for channels at the ends of a frequency band.

The MPR information for Intra-band uplink LTE CA is as below:

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2A.0-2 due to higher order modulation and contiguously allocated transmissions (resource blocks) is specified in Table 6.2.3A.1.3-1. In case the modulation format is different on different component carriers then the MPR is determined by the rules applied to higher order of those modulations.

Table 6.2.3A.1.3-1: Maximum Power Reduction (MPR) for Power Class 3								
Modulation	CA bandwidth Class B and C							MPR (dB)
	25 RB + 50 RB	50 RB + 50 RB	25 RB + 100 RB	50 RB + 100 RB	75 RB + 75 RB	75 RB + 100 RB	100 RB + 100 RB	
QPSK	> 8 and ≤ 25	> 12 and ≤ 50	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 16 and ≤ 75	> 18 and ≤ 100	≤ 1
QPSK	> 25	> 50	> 25	> 50	> 75	> 75	> 100	≤ 2
16 QAM	≤ 8	≤ 12	≤ 8	≤ 12	≤ 16	≤ 16	≤ 18	≤ 1
16 QAM	> 8 and ≤ 25	> 12 and ≤ 50	> 8 and ≤ 25	> 12 and ≤ 50	> 16 and ≤ 75	> 16 and ≤ 75	> 18 and ≤ 100	≤ 2
16 QAM	> 25	> 50	> 25	> 50	> 75	> 75	> 100	≤ 3

Table 1: MPR information for Uplink intra-band contiguous CA(QPSK and 16QAM)

For intra-band contiguous carrier aggregation the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2A.0-2 due to higher order modulation and contiguously aggregated transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3A.1\_1.3-1. In case the modulation format is different on different component carriers then the MPR is determined by the rules applied to higher order of those modulations.

Table 6.2.3A.1_1.3-1: Maximum Power Reduction (MPR) for Power Class 3								
Modulation	CA bandwidth Class B and C							MPR (dB)
	25 RB + 50 RB	50 RB + 50 RB	25 RB + 100 RB	50 RB + 100 RB	75 RB + 75 RB	75 RB + 100 RB	100 RB + 100 RB	
64 QAM	≤ 8 and allocation wholly contained within a single CC	≤ 12 and allocation wholly contained within a single CC	≤ 8 and allocation wholly contained within a single CC	≤ 12 and allocation wholly contained within a single CC	≤ 16 and allocation wholly contained within a single CC	≤ 16 and allocation wholly contained within a single CC	≤ 18 and allocation wholly contained within a single CC	≤ 2
64 QAM	> 8 or allocation extends across two CC's	> 12 or allocation extends across two CC's	> 8 or allocation extends across two CC's	> 12 or allocation extends across two CC's	> 16 or allocation extends across two CC's	> 16 or allocation extends across two CC's	> 18 or allocation extends across two CC's	≤ 3

### 1.1 Conducted power of GSM850(Second antenna)

GSM850		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	128CH	190CH	251CH		Tune-up Max.	128CH	190CH	251CH
GSM (CS)		33.70	31.72	<b>31.86</b>	31.94	-9.19	24.51	22.53	22.67	22.75
GPRS (GMSK)	1 Tx Slot	33.70	31.74	32.02	32.09	-9.19	24.51	22.55	22.83	22.90
	2 Tx Slots	32.20	30.54	30.53	30.21	-6.13	26.07	24.41	24.40	24.08
	3 Tx Slots	30.20	28.15	28.10	28.19	-4.42	25.78	23.73	23.68	23.77
	4 Tx Slots	28.20	26.17	25.96	25.65	-3.18	25.02	22.99	22.78	22.47
EDGE (GMSK)	1 Tx Slot	33.70	31.48	32.03	32.10	-9.19	24.51	22.29	22.84	22.91
	2 Tx Slots	32.20	30.29	30.22	29.91	-6.13	26.07	24.16	24.09	23.78
	3 Tx Slots	30.20	28.14	28.08	28.18	-4.42	25.78	23.72	23.66	23.76
	4 Tx Slots	28.20	26.17	25.96	25.61	-3.18	25.02	22.99	22.78	22.43
EDGE (8PSK)	1 Tx Slot	28.20	25.72	25.78	25.76	-9.19	19.01	16.53	16.59	16.57
	2 Tx Slots	26.20	24.20	24.22	23.97	-6.13	20.07	18.07	18.09	17.84
	3 Tx Slots	24.20	22.06	22.05	21.88	-4.42	19.78	17.64	17.63	17.46
	4 Tx Slots	22.20	20.06	19.96	20.15	-3.18	19.02	16.88	16.78	16.97

Table 1: Conducted power test results of GSM850

Note:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.

## 1.2 Conducted power of GSM850(Main antenna)

GSM850		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	128CH	190CH	251CH		Tune-up Max.	128CH	190CH	251CH
GSM (CS)		33.50	31.71	<b>31.88</b>	31.98	-9.19	24.31	22.52	22.69	22.79
GPRS (GMSK)	1 Tx Slot	33.50	31.70	32.07	32.14	-9.19	24.31	22.51	22.88	22.95
	2 Tx Slots	32.00	31.15	30.97	30.93	-6.13	25.87	25.02	24.84	24.80
	3 Tx Slots	30.00	28.31	28.14	27.92	-4.42	25.58	23.89	23.72	23.50
	4 Tx Slots	28.00	27.64	27.42	27.16	-3.18	24.82	24.46	24.24	23.98
EDGE (GMSK)	1 Tx Slot	33.50	31.56	32.06	32.09	-9.19	24.31	22.37	22.87	22.90
	2 Tx Slots	32.00	30.41	30.49	30.19	-6.13	25.87	24.28	24.36	24.06
	3 Tx Slots	30.00	28.16	28.22	27.95	-4.42	25.58	23.74	23.80	23.53
	4 Tx Slots	28.00	26.33	26.23	25.92	-3.18	24.82	23.15	23.05	22.74
EDGE (8PSK)	1 Tx Slot	28.00	25.95	26.05	26.06	-9.19	18.81	16.76	16.86	16.87
	2 Tx Slots	26.00	24.26	24.44	23.99	-6.13	19.87	18.13	18.31	17.86
	3 Tx Slots	24.00	22.31	22.24	22.20	-4.42	19.58	17.89	17.82	17.78
	4 Tx Slots	22.00	20.32	20.31	20.18	-3.18	18.82	17.14	17.13	17.00

Table 2: Conducted power test results of GSM850

Note:

- 1) The conducted power of GSM850 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.

### 1.3 Conducted power of GSM1900(Second antenna)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	512CH	661CH	810CH		Tune-up Max.	512CH	661CH	810CH
GSM (CS)		26.40	25.35	<b>26.20</b>	25.90	-9.19	17.21	16.16	17.01	16.71
GPRS (GMSK)	1 Tx Slot	26.40	25.49	26.29	25.97	-9.19	17.21	16.30	17.10	16.78
	2 Tx Slots	24.90	23.11	23.62	23.42	-6.13	18.77	16.98	17.49	17.29
	3 Tx Slots	22.90	21.76	20.33	21.80	-4.42	18.48	17.34	15.91	17.38
	4 Tx Slots	20.90	19.77	19.84	19.64	-3.18	17.72	16.59	16.66	16.46
EDGE (GMSK)	1 Tx Slot	26.40	25.45	26.28	25.91	-9.19	17.21	16.26	17.09	16.72
	2 Tx Slots	24.90	23.20	23.63	23.36	-6.13	18.77	17.07	17.50	17.23
	3 Tx Slots	22.90	21.70	20.29	21.61	-4.42	18.48	17.28	15.87	17.19
	4 Tx Slots	20.90	19.74	19.80	19.74	-3.18	17.72	16.56	16.62	16.56
EDGE (8PSK)	1 Tx Slot	22.90	21.67	22.29	21.50	-9.19	13.71	12.48	13.10	12.31
	2 Tx Slots	20.90	19.21	19.42	20.20	-6.13	14.77	13.08	13.29	14.07
	3 Tx Slots	18.90	17.90	17.55	17.63	-4.42	14.48	13.48	13.13	13.21
	4 Tx Slots	16.90	15.15	15.88	15.64	-3.18	13.72	11.97	12.70	12.46

Table 3: Conducted power test results of GSM1900 (Receiver ON)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	512CH	661CH	810CH		Tune-up Max.	512CH	661CH	810CH
GSM (CS)		29.40	28.00	<b>28.50</b>	28.38	-9.19	20.21	18.81	19.31	19.19
GPRS (GMSK)	1 Tx Slot	29.40	28.24	28.64	28.49	-9.19	20.21	19.05	19.45	19.30
	2 Tx Slots	27.90	25.73	25.78	25.70	-6.13	21.77	19.60	19.65	19.57
	3 Tx Slots	25.90	24.05	24.80	24.45	-4.42	21.48	19.63	20.38	20.03
	4 Tx Slots	23.90	22.76	22.88	22.62	-3.18	20.72	19.58	19.70	19.44
EDGE (GMSK)	1 Tx Slot	29.40	28.17	28.62	28.53	-9.19	20.21	18.98	19.43	19.34
	2 Tx Slots	27.90	25.70	25.74	25.61	-6.13	21.77	19.57	19.61	19.48
	3 Tx Slots	25.90	24.17	24.78	24.41	-4.42	21.48	19.75	20.36	19.99
	4 Tx Slots	23.90	22.64	23.12	22.53	-3.18	20.72	19.46	19.94	19.35
EDGE (8PSK)	1 Tx Slot	25.90	24.30	25.05	24.54	-9.19	16.71	15.11	15.86	15.35
	2 Tx Slots	23.90	22.70	22.62	22.66	-6.13	17.77	16.57	16.49	16.53
	3 Tx Slots	21.90	20.20	19.95	20.15	-4.42	17.48	15.78	15.53	15.73
	4 Tx Slots	19.90	19.12	18.90	18.81	-3.18	16.72	15.94	15.72	15.63

Table 4: Conducted power test results of GSM1900 (Receiver OFF)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	512CH	661CH	810CH		Tune-up Max.	512CH	661CH	810CH
GSM (CS)		25.40	23.66	24.24	24.04	-9.19	16.21	14.47	15.05	14.85
GPRS (GMSK)	1 Tx Slot	25.40	23.89	24.42	24.19	-9.19	16.21	14.70	15.23	15.00
	2 Tx Slots	23.90	21.94	<b>22.45</b>	22.23	-6.13	17.77	15.81	16.32	16.10
	3 Tx Slots	21.90	20.70	20.85	20.65	-4.42	17.48	16.28	16.43	16.23
	4 Tx Slots	19.90	18.55	18.73	18.66	-3.18	16.72	15.37	15.55	15.48
EDGE (GMSK)	1 Tx Slot	25.40	23.84	24.37	24.13	-9.19	16.21	14.65	15.18	14.94
	2 Tx Slots	23.90	21.86	22.40	22.23	-6.13	17.77	15.73	16.27	16.10
	3 Tx Slots	21.90	20.63	20.82	20.71	-4.42	17.48	16.21	16.40	16.29
	4 Tx Slots	19.90	18.60	18.71	18.63	-3.18	16.72	15.42	15.53	15.45
EDGE (8PSK)	1 Tx Slot	21.90	20.69	20.66	20.71	-9.19	12.71	11.50	11.47	11.52
	2 Tx Slots	19.90	18.81	18.95	18.69	-6.13	13.77	12.68	12.82	12.56
	3 Tx Slots	17.90	16.74	17.17	16.34	-4.42	13.48	12.32	12.75	11.92
	4 Tx Slots	15.90	15.03	14.93	14.48	-3.18	12.72	11.85	11.75	11.30



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Table 5: Conducted power test results of GSM1900 (WIFI/Hotspot ON)

Note:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.

## 1.4 Conducted power of GSM1900(Main antenna)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	512CH	661CH	810CH		Tune-up Max.	512CH	661CH	810CH
GSM (CS)		30.50	29.18	<b>29.68</b>	29.55	-9.19	21.31	19.99	20.49	20.36
GPRS (GMSK)	1 Tx Slot	30.50	29.28	29.76	29.62	-9.19	21.31	20.09	20.57	20.43
	2 Tx Slots	29.00	28.26	28.11	28.07	-6.13	22.87	22.13	21.98	21.94
	3 Tx Slots	27.00	25.90	26.08	25.87	-4.42	22.58	21.48	21.66	21.45
	4 Tx Slots	25.00	23.91	23.99	23.94	-3.18	21.82	20.73	20.81	20.76
EDGE (GMSK)	1 Tx Slot	30.50	29.21	29.69	29.55	-9.19	21.31	20.02	20.50	20.36
	2 Tx Slots	29.00	27.94	28.01	27.95	-6.13	22.87	21.81	21.88	21.82
	3 Tx Slots	27.00	25.83	26.02	25.75	-4.42	22.58	21.41	21.60	21.33
	4 Tx Slots	25.00	23.84	23.84	23.85	-3.18	21.82	20.66	20.66	20.67
EDGE (8PSK)	1 Tx Slot	27.00	25.11	25.48	25.39	-9.19	17.81	15.92	16.29	16.20
	2 Tx Slots	25.00	23.62	24.11	23.81	-6.13	18.87	17.49	17.98	17.68
	3 Tx Slots	23.00	21.93	22.22	22.18	-4.42	18.58	17.51	17.80	17.76
	4 Tx Slots	21.00	19.95	19.66	20.40	-3.18	17.82	16.77	16.48	17.22

Table 6: Conducted power test results of GSM1900 (Receiver ON&amp;Receiver OFF)

GSM1900		Burst-Averaged output Power (dBm)				Division Factors	Frame-Averaged output Power (dBm)			
		Tune-up Max.	512CH	661CH	810CH		Tune-up Max.	512CH	661CH	810CH
GSM (CS)		29.50	28.06	28.68	28.55	-9.19	20.31	18.87	19.49	19.36
GPRS (GMSK)	1 Tx Slot	29.50	28.38	28.99	28.85	-9.19	20.31	19.19	19.80	19.66
	2 Tx Slots	28.00	27.16	<b>27.28</b>	26.95	-6.13	21.87	21.03	21.15	20.82
	3 Tx Slots	26.00	24.94	25.15	25.10	-4.42	21.58	20.52	20.73	20.68
	4 Tx Slots	24.00	23.01	23.13	22.94	-3.18	20.82	19.83	19.95	19.76
EDGE (GMSK)	1 Tx Slot	29.50	28.36	28.96	28.83	-9.19	20.31	19.17	19.77	19.64
	2 Tx Slots	28.00	27.03	27.23	27.02	-6.13	21.87	20.90	21.10	20.89
	3 Tx Slots	26.00	24.92	25.14	25.07	-4.42	21.58	20.50	20.72	20.65
	4 Tx Slots	24.00	23.08	23.08	22.92	-3.18	20.82	19.90	19.90	19.74
EDGE (8PSK)	1 Tx Slot	26.00	24.91	25.19	25.12	-9.19	16.81	15.72	16.00	15.93
	2 Tx Slots	24.00	23.05	23.25	23.11	-6.13	17.87	16.92	17.12	16.98
	3 Tx Slots	22.00	21.17	21.11	20.84	-4.42	17.58	16.75	16.69	16.42
	4 Tx Slots	20.00	19.27	19.12	18.93	-3.18	16.82	16.09	15.94	15.75

Table 7: Conducted power test results of GSM1900 (WiFi station/Hotspot ON)

Note:

- 1) The conducted power of GSM1900 is measured with RMS detector.
- 2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- 3) The bolded GPRS 2 Tx Slots mode was selected for SAR testing according to the highest frame-averaged output power.



### 1.5 Conducted power of UMTS Band II(Second antenna)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	16.90	15.94	<b>15.99</b>	15.87
	12.2kbps AMR	16.90	15.86	15.98	15.86
HSDPA	Subtest 1	15.90	14.92	15.04	14.86
	Subtest 2	15.90	14.92	15.03	14.87
	Subtest 3	15.40	14.40	14.52	14.32
	Subtest 4	15.40	14.45	14.49	14.35
HSUPA	Subtest 1	15.90	13.85	13.98	13.81
	Subtest 2	13.90	13.31	13.01	13.33
	Subtest 3	14.90	13.89	14.85	14.83
	Subtest 4	13.90	13.11	12.81	12.67
	Subtest 5	15.90	14.96	15.03	14.85
DC-HSDPA	Subtest 1	15.90	14.95	15.06	14.84
	Subtest 2	15.90	14.93	15.00	14.83
	Subtest 3	15.40	14.45	14.52	14.31
	Subtest 4	15.40	14.42	14.52	14.38

Table 8: Conducted power test results of UMTS Band II (Receiver ON/Hotspot ON)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	21.40	20.36	<b>20.50</b>	20.29
	12.2kbps AMR	21.40	20.30	20.42	20.22
HSDPA	Subtest 1	20.40	19.33	19.45	19.26
	Subtest 2	20.40	19.35	19.42	19.27
	Subtest 3	19.90	18.84	18.95	18.75
	Subtest 4	19.90	18.84	18.93	18.77
HSUPA	Subtest 1	20.40	18.42	18.48	18.34
	Subtest 2	18.40	17.33	17.42	17.26
	Subtest 3	19.40	18.29	18.41	18.25
	Subtest 4	18.40	17.14	17.25	17.04
	Subtest 5	20.40	19.35	19.45	19.27
DC-HSDPA	Subtest 1	20.40	19.33	19.42	19.23
	Subtest 2	20.40	19.33	19.46	19.27
	Subtest 3	19.90	18.84	18.95	18.76
	Subtest 4	19.90	18.87	18.91	18.78

Table 9: Conducted power test results of UMTS Band II (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is  $\leq \frac{1}{4}$  dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is  $\leq 75\%$  of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.



**1.6 Conducted power of UMTS Band II(Main antenna)**

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	24.20	23.27	<b>23.43</b>	23.17
	12.2kbps AMR	24.20	23.31	23.41	23.21
HSDPA	Subtest 1	23.20	22.33	22.44	22.24
	Subtest 2	23.20	22.30	22.41	22.24
	Subtest 3	22.70	21.80	21.91	21.74
	Subtest 4	22.70	21.81	21.93	21.74
HSUPA	Subtest 1	23.20	22.34	22.33	22.19
	Subtest 2	21.20	20.24	20.37	20.16
	Subtest 3	22.20	21.32	21.30	21.21
	Subtest 4	21.20	20.27	20.33	20.30
	Subtest 5	23.20	22.28	22.33	22.26
DC-HSDPA	Subtest 1	23.20	22.16	22.28	22.18
	Subtest 2	23.20	22.29	22.26	22.21
	Subtest 3	22.70	21.75	21.77	21.67
	Subtest 4	22.70	21.75	21.74	21.68

Table 10: Conducted power test results of UMTS Band II (Receiver ON)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	22.50	21.63	<b>21.70</b>	21.53
	12.2kbps AMR	22.50	21.60	21.73	21.50
HSDPA	Subtest 1	21.50	20.60	20.71	20.55
	Subtest 2	21.50	20.57	20.71	20.53
	Subtest 3	21.00	20.10	20.21	20.03
	Subtest 4	21.00	20.17	20.20	20.04
HSUPA	Subtest 1	21.50	20.66	20.66	20.49
	Subtest 2	19.50	18.59	18.59	18.52
	Subtest 3	20.50	19.55	19.65	19.54
	Subtest 4	19.50	18.66	18.63	18.49
	Subtest 5	21.50	20.62	20.66	20.49
DC-HSDPA	Subtest 1	21.50	18.60	18.56	18.54
	Subtest 2	21.50	19.61	19.71	19.53
	Subtest 3	21.00	18.40	18.51	18.34
	Subtest 4	21.00	20.64	20.73	20.53

Table 11: Conducted power test results of UMTS Band II (Receiver OFF)

UMTS Band II		Tune-up	Average Power (dBm)		
		Max.	9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	21.50	20.58	<b>20.64</b>	20.54
	12.2kbps AMR	21.50	20.57	20.64	20.52
HSDPA	Subtest 1	20.50	19.62	19.60	19.49
	Subtest 2	20.50	19.56	19.61	19.49
	Subtest 3	20.00	19.04	19.09	18.98
	Subtest 4	20.00	19.05	19.14	19.02
HSUPA	Subtest 1	20.50	19.55	19.59	19.57
	Subtest 2	18.50	17.54	17.64	17.51
	Subtest 3	19.50	18.52	18.60	18.56
	Subtest 4	18.50	17.63	17.61	17.53
	Subtest 5	20.50	19.63	19.59	19.49
DC-HSDPA	Subtest 1	20.50	19.54	19.61	19.49
	Subtest 2	20.50	19.56	19.56	19.48
	Subtest 3	20.00	19.06	19.11	18.97
	Subtest 4	20.00	19.05	19.07	18.99

Table 12: Conducted power test results of UMTS Band II (WiFi station/Hotspot ON)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is  $\leq \frac{1}{4}$  dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is  $\leq 75\%$  of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

### 1.7 Conducted power of UMTS Band IV(Second antenna)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	19.40	18.92	<b>18.75</b>	18.69
	12.2kbps AMR	19.40	18.97	18.80	18.67
HSDPA	Subtest 1	18.40	17.92	17.77	17.64
	Subtest 2	18.40	17.90	17.77	17.63
	Subtest 3	17.90	17.39	17.28	17.07
	Subtest 4	17.90	17.44	17.28	17.14
HSUPA	Subtest 1	18.40	16.05	15.91	15.77
	Subtest 2	16.40	15.87	15.73	15.60
	Subtest 3	17.40	16.84	16.73	16.58
	Subtest 4	16.40	15.67	15.56	15.39
	Subtest 5	18.40	17.89	17.79	17.65
DC-HSDPA	Subtest 1	18.40	17.91	17.76	17.62
	Subtest 2	18.40	17.88	17.79	17.62
	Subtest 3	17.90	17.44	17.25	17.13
	Subtest 4	17.90	17.39	17.29	17.12

Table 13: Conducted power test results of UMTS Band IV (Receiver ON/Hotspot ON)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	20.40	20.10	<b>19.96</b>	19.74
	12.2kbps AMR	20.40	19.98	19.95	19.79
HSDPA	Subtest 1	19.40	19.01	18.90	18.70
	Subtest 2	19.40	19.01	18.89	18.70
	Subtest 3	18.90	18.53	18.40	18.24
	Subtest 4	18.90	18.52	18.42	18.24
HSUPA	Subtest 1	19.40	18.47	18.32	18.18
	Subtest 2	17.40	16.97	16.85	16.68
	Subtest 3	18.40	17.96	17.83	17.65
	Subtest 4	17.40	16.77	16.66	16.49
	Subtest 5	19.40	19.00	18.85	18.68
DC-HSDPA	Subtest 1	19.40	18.99	18.89	18.69
	Subtest 2	19.40	19.03	18.89	18.72
	Subtest 3	18.90	18.49	18.36	18.23
	Subtest 4	18.90	18.49	18.40	18.18

Table 14: Conducted power test results of UMTS Band IV (Receiver OFF)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is  $\leq \frac{1}{4}$  dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is  $\leq 75\%$  of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.

**1.8 Conducted power of UMTS Band IV(Main antenna)**

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	24.50	23.93	<b>23.96</b>	23.80
	12.2kbps AMR	24.50	23.94	23.89	23.79
HSDPA	Subtest 1	23.50	22.99	22.91	22.82
	Subtest 2	23.50	22.92	22.88	22.80
	Subtest 3	23.00	22.42	22.41	22.27
	Subtest 4	23.00	22.45	22.36	22.25
HSUPA	Subtest 1	23.50	22.95	22.87	22.75
	Subtest 2	21.50	20.91	20.82	20.77
	Subtest 3	22.50	21.92	21.90	21.71
	Subtest 4	21.50	20.91	20.87	20.69
	Subtest 5	23.50	22.89	22.85	22.78
DC-HSDPA	Subtest 1	23.50	22.90	22.90	22.74
	Subtest 2	23.50	22.88	22.88	22.75
	Subtest 3	23.00	22.38	22.35	22.23
	Subtest 4	23.00	22.37	22.35	22.22

Table 15: Conducted power test results of UMTS Band IV (Receiver ON)

UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	22.50	21.34	<b>21.06</b>	21.20
	12.2kbps AMR	22.50	21.45	21.21	21.31
HSDPA	Subtest 1	21.50	20.90	20.92	20.79
	Subtest 2	21.50	20.90	20.91	20.81
	Subtest 3	21.00	20.40	20.40	20.26
	Subtest 4	21.00	20.41	20.37	20.25
HSUPA	Subtest 1	21.50	20.91	20.86	20.80
	Subtest 2	19.50	18.93	18.93	18.74
	Subtest 3	20.50	19.96	19.86	19.75
	Subtest 4	19.50	18.92	18.82	18.73
	Subtest 5	21.50	20.94	20.87	20.77
DC-HSDPA	Subtest 1	21.50	18.90	18.87	18.77
	Subtest 2	21.50	19.90	19.91	19.78
	Subtest 3	21.00	18.73	18.68	18.59
	Subtest 4	21.00	20.96	20.92	20.79

Table 16: Conducted power test results of UMTS Band IV (Receiver OFF)



UMTS Band IV		Tune-up	Average Power (dBm)		
		Max.	1312CH	1413CH	1513CH
WCDMA	12.2kbps RMC	22.00	<b>20.68</b>	<b>20.42</b>	<b>20.47</b>
	12.2kbps AMR	22.00	20.66	20.41	20.46
HSDPA	Subtest 1	21.00	20.35	20.30	20.28
	Subtest 2	21.00	20.40	20.39	20.24
	Subtest 3	20.50	19.89	19.89	19.76
	Subtest 4	20.50	19.89	19.85	19.75
HSUPA	Subtest 1	21.00	20.40	20.39	20.27
	Subtest 2	19.00	18.42	18.34	18.28
	Subtest 3	20.00	19.34	19.41	19.27
	Subtest 4	19.00	18.41	18.35	18.22
	Subtest 5	21.00	20.46	20.41	20.27
DC-HSDPA	Subtest 1	21.00	20.36	20.34	20.22
	Subtest 2	21.00	20.39	20.36	20.26
	Subtest 3	20.50	19.89	19.88	19.72
	Subtest 4	20.50	19.86	19.87	19.72

Table 17: Conducted power test results of UMTS Band IV (WiFi station/Hotspot ON)

Note:

- 1) The bolded 12.2kbps RMC mode was selected for SAR testing.
- 2) When maximum output of each RF channel with HSDPA/HSUPA/DC-HSDPA active is  $\leq \frac{1}{4}$  dB higher than without HSDPA/HSUPA/DC-HSDPA using 12.2 kbps RMC or maximum SAR for 12.2 kbps RMC is  $\leq 75\%$  of SAR limit, SAR evaluation for HSDPA/HSUPA/DC-HSDPA is not required.