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Part 1 SAR TEST REPORT

Applicant Name: **SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	**Date of Issue:** Nov. 3, 2023 **Test Report No.:** HCT-SR-2310-FC006-R2 **Test Site: HCT CO., LTD.**

FCC ID: **A3LSMS926U**

Equipment Type:	**Mobile Phone**
Application Type	**Certification**
FCC Rule Part(s):	**CFR §2.1093**
Model Name:	**SM-S926U**
Additional Model Name:	**SM-S926U1**
Date of Test:	**Sep. 11, 2023 ~ Oct. 29, 2023**

This device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in FCC KDB procedures and had been tested in accordance with the measurement procedures specified in FCC KDB procedures.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By

Da Sol, Lee
Test Engineer
SAR Team
Certification Division

Reviewed By

Yun-jeang, Heo
Technical Manager
SAR Team
Certification Division

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	Oct. 16, 2023	Initial Release
1	Oct. 30, 2023	Revised Typo and LTE 38,41,
2	Nov. 03, 2023	Revised Sec. 13, Sec. 17

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

Table of Contents

1. Test Regulations

The tests documented in this report were performed in accordance with FCC CFR § 2.1093, IEEE 1528-2013, ANSI C63.26-2015 the following FCC Published RF exposure KDB procedures:

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D04 Interim General RF Exposure Guidance v01
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 616217 D04 v01r02 (Proximity Sensor)
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

In Addition to the above, the following information was used.

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Overlapping LTE Bands Test exclusion)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- May 2017 TCBC Workshop Notes (LTE Band 41 Power Class 2)
- April 2019 TCBC Workshop Notes (IEEE 802.11 ax)
- April 2018 TCBC Workshop Notes (LTE UL CA, DL CA SAR Test Exclusion)
- November 2019 TCBC Workshop Notes (SPLSR Hotspot Combination)
- April 2019 and Oct 2020 TCBC Workshop Notes (Dynamic Antenna tuning)

2. Test Location

2.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,Gyeonggi-do, 17383 KOREA
Telephone	031-645-6300
Fax.	031-645-6401

2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-S926U
Additional Model Name	SM-S926U1
Equipment Type	Mobile Phone
FCC ID	A3LSMS926U
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)		
			1g Head	1g Body	10g Phablet
GSM/GPRS/EDGE 850	824.2 ㎒ ~ 848.8 ㎒	PCE	0.59	0.71	N/A
GSM/GPRS/EDGE 1900	1 850.2 ㎒ ~ 1 909.8 ㎒	PCE	<0.10	1.1	N/A
UMTS Band 5	826.4 ㎒ ~ 846.6 ㎒	PCE	0.95	0.36	N/A
UMTS Band 4	1 712.4 ㎒ ~ 1 752.6 ㎒	PCE	0.18	**1.14**	N/A
UMTS Band 2	1 852.4 ㎒ ~ 1 907.6 ㎒	PCE	0.11	0.96	N/A
LTE FDD Band 2 (PCS)	1 850.7 ㎒ ~ 1 909.3 ㎒	PCE	N/A	N/A	N/A
LTE FDD Band 4 (AWS)	1 710.7 ㎒ ~ 1 754.3 ㎒	PCE	N/A	N/A	N/A
LTE FDD Band 5 (Cell)	824.7 ㎒ ~ 848.3 ㎒	PCE	N/A	N/A	N/A
LTE FDD Band 7	2 502.5 ㎒ ~ 2 567.5 ㎒	PCE	0.83	0.65	N/A
LTE FDD Band 12	699.7 ㎒ ~ 715.3 ㎒	PCE	0.51	0.3	N/A
LTE FDD Band 13	779.5 ㎒ ~ 784.5 ㎒	PCE	0.81	0.36	N/A
LTE FDD Band 14	790.5 ㎒ ~ 795.5 ㎒	PCE	0.9	0.64	N/A
LTE FDD Band 25 (PCS)	1 850.7 ㎒ ~ 1 914.3 ㎒	PCE	0.85	0.81	N/A
LTE FDD Band 26 (Cell)	814.7 ㎒ ~ 848.3 ㎒	PCE	0.96	0.5	N/A
LTE FDD Band 30	2 307.5 ㎒ ~ 2 312.5 ㎒	PCE	0.84	0.78	N/A
LTE TDD Band 38	2 572.5 ㎒ ~ 2 617.5 ㎒	PCE	**1.16**	0.45	N/A
LTE TDD Band 41	2 498.5 ㎒ ~ 2 687.5 ㎒	PCE	0.83	0.44	N/A
LTE TDD Band 48	3 552.5 ㎒ ~ 3 697.5 ㎒	CBE	0.89	0.54	N/A
LTE FDD Band 66 (AWS)	1 710.7 ㎒ ~ 1 779.3 ㎒	PCE	1.05	1.02	N/A
LTE FDD Band 71	665.5 ㎒ ~ 695.5 ㎒	PCE	0.62	0.31	N/A
NR FDD Band n2 (PCS)	1 852.5 ㎒ ~ 1 907.5 ㎒	PCE	N/A	N/A	N/A
NR FDD Band n5	826.5 ㎒ ~ 846.5 ㎒	PCE	N/A	N/A	N/A
NR FDD Band n7	2 502.5 ㎒ ~ 2 567.5 ㎒	PCE	1.09	0.95	N/A
NR FDD Band n12	701.5 ㎒ ~ 713.5 ㎒	PCE	0.57	0.25	N/A
NR FDD Band n25 (PCS)	1 852.5 ㎒ ~ 1 912.5 ㎒	PCE	0.94	0.97	N/A
NR FDD Band n26	816.5 ㎒ ~ 846.5 ㎒	PCE	0.89	0.5	N/A
NR FDD Band n30	2 307.5 ㎒ ~ 2 312.5 ㎒	PCE	0.94	0.9	N/A
NR TDD Band n38	2 575 ㎒ ~ 2 615 ㎒	PCE	N/A	N/A	N/A
NR TDD Band n41	2 501.01 ㎒ ~ 2 685 ㎒	PCE	1.02	0.73	N/A
NR TDD Band n48	3 555 ㎒ ~ 3 695.01 ㎒	CBE	**0.94**	**0.79**	N/A
NR FDD Band n66	1 712.5 ㎒ ~ 1 777.5 ㎒	PCE	1.05	1.07	N/A
NR FDD Band n70	1 697.5 ㎒ ~ 1 707.5 ㎒	PCE	1.09	0.97	N/A
NR FDD Band n71	665.5 ㎒ ~ 695.5 ㎒	PCE	0.88	0.23	N/A
NR TDD Band n77	3 445.01 ㎒ ~ 3 544.98 ㎒ 3 705 ㎒ ~ 3 975 ㎒	PCE	1.05	0.84	N/A
NR TDD Band n78	3 455.01 ㎒ ~ 3 544.98 ㎒ 3 705 ㎒ ~ 3 795 ㎒	PCE	N/A	0.49	N/A
802.11b	2 412 ㎒ ~ 2 462 ㎒	DTS	0.33	0.73	N/A
U-NII-1	5 180 ㎒ ~ 5 240 ㎒	NII	N/A	N/A	N/A
U-NII-2A	5 260 ㎒ ~ 5 320 ㎒	NII	0.25	0.32	1.55
U-NII-2C	5 500 ㎒ ~ 5 720 ㎒	NII	0.54	0.47	1.7
U-NII-3	5 745 ㎒ ~ 5 825 ㎒	NII	0.59	**0.49**	N/A
U-NII-4	5 845 ㎒ ~ 5 885 ㎒	NII	**0.59**	0.29	**2.38**
Bluetooth	2 402 ㎒ ~ 2 480 ㎒	DSS/DTS	0.61	0.33	N/A
NFC	13.56 ㎒	DXX	N/A	N/A	**<0.1**
Simultaneous SAR per KDB 690783 D01v01r03			**1.335**	**1.550**	**2.379**
Date(s) of Tests:	Sep. 12 2023 ~ Oct. 29 2023				

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	**Operating Mode**	**Tx Frequency**
GSM850	Voice / Data	824.2 ㎒ ~ 848.8 ㎒
GSM1900	Voice / Data	1 850.2 ㎒ ~ 1 909.8 ㎒
UMTS Band 2	Voice / Data	1 852.4 ㎒ ~ 1 907.6 ㎒
UMTS Band 4	Voice / Data	1 712.4 ㎒ ~ 1 752.6 ㎒
UMTS Band 5	Voice / Data	826.4 ㎒ ~ 846.6 ㎒
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE FDD Band 5 (Cell)	Voice / Data	824.7 ㎒ ~ 848.3 ㎒
LTE FDD Band 7	Voice / Data	2 502.5 ㎒ ~ 2 567.5 ㎒
LTE FDD Band 12	Voice / Data	699.7 ㎒ ~ 715.3 ㎒
LTE FDD Band 13	Voice / Data	779.5 ㎒ ~ 784.5 ㎒
LTE FDD Band 14	Voice / Data	790.5 ㎒ ~ 795.5 ㎒
LTE FDD Band 25	Voice / Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE FDD Band 26	Voice / Data	814.7 ㎒ ~ 848.3 ㎒
LTE FDD Band 30	Voice / Data	2 307.5 ㎒ ~ 2 312.5 ㎒
LTE TDD Band 38	Voice / Data	2 572.5 ㎒ ~ 2 617.5 ㎒
LTE TDD Band 41	Voice / Data	2 498.5 ㎒ ~ 2 687.5 ㎒
LTE TDD Band 48	Voice / Data	3 552.5 ㎒ ~ 3 697.5 ㎒
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 779.3 ㎒
LTE FDD Band 71	Voice / Data	665.5 ㎒ ~ 695.5 ㎒
NR FDD Band n2 (PCS)	Voice / Data	1 852.5 ㎒ ~ 1 907.5 ㎒
NR FDD Band n5	Voice / Data	826.5 ㎒ ~ 846.5 ㎒
NR FDD Band n7	Voice / Data	2 502.5 ㎒ ~ 2 567.5 ㎒
NR FDD Band n12	Voice / Data	701.5 ㎒ ~ 713.5 ㎒
NR FDD Band n25 (PCS)	Voice / Data	1 852.5 ㎒ ~ 1 912.5 ㎒
NR FDD Band n26	Voice / Data	816.5 ㎒ ~ 846.5 ㎒
NR FDD Band n30	Voice / Data	2 307.5 ㎒ ~ 2 312.5 ㎒
NR TDD Band n38	Voice / Data	2 575 ㎒ ~ 2 615 ㎒
NR TDD Band n41	Voice / Data	2 501.01 ㎒ ~ 2 685 ㎒
NR TDD Band n48	Voice / Data	3 555 ㎒ ~ 3 695.01 ㎒
NR FDD Band n66	Voice / Data	1 712.5 ㎒ ~ 1 777.5 ㎒
NR FDD Band n70	Voice / Data	1 697.5 ㎒ ~ 1 707.5 ㎒
NR FDD Band n71	Voice / Data	665.5 ㎒ ~ 695.5 ㎒
NR TDD Band n77	Voice / Data	3 705 ㎒ ~ 3 975 ㎒
NR TDD Band n77 DoD	Voice / Data	3 445.01 ㎒ ~ 3 544.98 ㎒
NR TDD Band n78	Voice / Data	3 705 ㎒ ~ 3 795 ㎒
NR TDD Band n78 DoD	Voice / Data	3 455.01 ㎒ ~ 3 544.98 ㎒
NR Band n258	Data	24 250 ㎒ ~ 24 450 ㎒; 24 750 ㎒ ~ 25 250 ㎒
NR Band n260	Data	37 000 ㎒ ~ 40 000 ㎒
NR Band n261	Data	27 500 ㎒ ~ 28 350 ㎒
U-NII-1	Voice / Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Voice / Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Voice / Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Voice / Data	5 745 ㎒ ~ 5 825 ㎒
U-NII-4	Voice / Data	5 845 ㎒ ~ 5 885 ㎒
U-NII-5	Voice / Data	5 925 ㎒ – 6 425 ㎒
U-NII-6	Voice / Data	6 425 ㎒ – 6 525 ㎒
U-NII-7	Voice / Data	6 525 ㎒ – 6 865 ㎒
U-NII-8	Voice / Data	6 865 ㎒ – 7 115 ㎒
2.4 ㎓ WLAN	Voice / Data	2 412 ㎒ ~ 2 462 ㎒
Bluetooth / LE 5.3	Data	2 402 ㎒ ~ 2 480 ㎒
NFC	Data	13.56 ㎒
WPC	Data	110 ㎑ ~ 148 ㎑

Device Description		
S/W Version	S926U.001	
H/W Version	REV1.0	
Battery	EB-BS926ABY (ATL)	
Device Serial Numbers	**Mode**	**Serial Number**
	GSM850, GSM 1900 ,UMTS B2/B4/B5	WI49298M,
	LTE 7, LTE 12, LTE 13, LTE 14, LTE 26, LTE 30, LTE 41, LTE 48, LTE 71, NFC	WI40289M, WI40313M
	LTE 25, LTE 66	WI40295M
	NR n7, NR n12, NR n26, NR n71, NR n48, NR n77, NR n78	WI40310M, WI40295M
	NR n25, NR n66, NR n70	WI40286M, WII1147M, WII1154M
	NR n30, NR n41	WII1147M, WI40340M, WII1154M
	NR n41 SRS	WJ60105M
	NR n48 SRS	WII1178M
	NR n77 SRS	WII1139M, WII1147M
	WLAN 2.4G, WLAN 5G, WLAN 6E	WIC0511M
	UWB	WIE0393M
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit (i.e., Plimit for sub-6 radio and WLAN/BT), for each characterized technology and band (see SAR Part 0 Test Report). The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target or PD_design_target, below the predefined time-averaged power limit (i.e., Plimit for sub-6 radio and WLAN/BT, and input.power.limit for 5G mmW NR), for each characterized technology and band (see SAR Part 0 Test Report).
SARchar for WIFI 6GHz can be found in the 6-8 GHz RF Exposure Report

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

Note that the device uncertainty for sub-6GHz WWAN and WLAN/BT is 1.0dB for this EUT.

All MIMO Pmax and Plimit are defined per Antenna chain.

*Note all Plimit EFS and maximum tune up output power Pmax levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD, GFSK, OFDM modulation schemes (e.g. GSM and LTE TDD and WLAN/BT).
*Maximum tune up output power Pmax is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty. The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G Sub6 WWAN and WLAN/BT technology, band, and DSI = minimum of "Plimit EFS" and "Maximum tune up output power Pmax" + 1dB device uncertainty.

SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06. The purpose of this report (SAR Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

Measurement Condition: All conducted power and SAR measurements in this report (SAR Part 1 test) were performed by setting Reserve_power_margin (Smart Transmit EFS entry) to 0dB

Plim values in green indicate Plimit < Pmax			Plim values in grey indicate Plim > Pmax				
Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target						Pmax	
SAR Exposure Position			Head (RCV ON)	Hotspot (Hotspot on)	Phablet (Grip On) /Earjack	Maximum Tune-up Output Power (Burst Average Power) [dBm]	UL:DL Ratio
Averaging volume			1g	1g	10g		
seperation Distance			0 mm	10 mm	0 mm		
Mode	Band	Antenna	DSI=1	DSI=0	DSI=0		
GSM/GPRS/EDGE	850	Sub 1	21.2	27.5		27.5	50.0%
GSM/GPRS/EDGE	850	MAIN 1	40.3	31.2		33.5	50.0%
GSM/GPRS/EDGE	1900	MAIN 1	34.1	19.0		24.0	50.0%
UMTS	2	MAIN 1	34.5	18.5		23.8	100%
UMTS	4	MAIN 1	31.4	18.0		22.8	100%
UMTS	5	Sub 1	21.0	27.7		24.5	100%
UMTS	5	MAIN 1	38.0	29.3		24.5	100%
LTE FDD	25(2)	MAIN 1	34.2	18.0		23.5	100%
LTE FDD	25(2)	Sub 2	18.0	20.0		23.5	100%
LTE FDD	66(4)	MAIN 1	32.0	18.5		23.5	100%
LTE FDD	66(4)	Sub 2	18.0	20.0		23.5	100%
LTE FDD	7	MAIN 2	29.9	20.0		23.0	100%
LTE FDD	7	Sub 2	15.5	19.5		23.0	100%
LTE FDD	12	MAIN 1	34.4	29.3		24.0	100%
LTE FDD	12	Sub 1	21.0	26.9		24.0	100%
LTE FDD	13	MAIN 1	35.7	28.3		24.0	100%
LTE FDD	13	Sub 1	21.0	27.0		24.0	100%
LTE FDD	14	MAIN 1	37.2	28.3		24.0	100%
LTE FDD	14	Sub 1	21.0	27.0		24.0	100%
LTE FDD	26(5)	Sub 1	21.0	27.1		24.0	100%
LTE FDD	26(5)	MAIN 1	37.0	29.0		24.0	100%
LTE FDD	30	Sub 2	16.5	20.0		22.0	100%
LTE FDD	30	MAIN 1	40.6	19.0		22.5	100%
LTE TDD PC3	38	MAIN 2	33.9	20.0		24.0	63.3%
LTE TDD PC3	41	MAIN 2	18.4	20.0		24.0	63.3%
LTE TDD PC3	38	Sub 2	17.0	19.0		24.0	63.3%
LTE TDD PC3	41	Sub 2	15.5	17.0		24.0	63.3%
LTE TDD PC2	41	MAIN 2	18.4	20.0		25.7	43.3%
LTE TDD PC2	41	Sub 2	15.5	17.0		25.7	43.3%
LTE TDD PC3	48	Sub 2	16.0	19.0		22.5	63.3%
LTE FDD	71	MAIN 1	34.4	29.6		24.0	100%
LTE FDD	71	Sub 1	21.0	28.4		24.0	100%
NR FDD	25(2)	MAIN 1	32.2	19.0		23.5	100%
NR FDD	25(2)	Sub 2	18.0	20.0		23.5	100%
NR FDD	7	MAIN 2	29.3	20.0		23.0	100%
NR FDD	7	Sub 2	16.0	20.0		23.0	100%
NR FDD	12	MAIN 1	37.0	27.8		24.0	100%
NR FDD	12	Sub 1	21.0	28.2		24.0	100%
NR FDD	26(5)	Sub 1	21.0	26.3		24.0	100%
NR FDD	26(5)	MAIN 1	35.9	27.7		24.0	100%
NR FDD	30	Sub 2	17.0	20.0		22.0	100%
NR FDD	30	MAIN 1	37.3	19.0		22.5	100%
NR TDD SRS 0 PC2	41(38)	Sub 2 F	17.0	19.0		26.0	100%
NR TDD SRS 1	41	MAIN 2 B	22.0	20.0		22.5	100%
NR TDD SRS 2	41	E	16.5	16.0		20.0	100%
NR TDD SRS 3	41	D	16.5	19.0		19.0	100%
NR TDD SRS 0 PC2	41(38)	MAIN 2 B	24.0	20.0		26.0	100%
NR TDD SRS 1	41	Sub 2 F	16.0	19.0		21.0	100%
NR TDD SRS 2	41	D	19.0	18.5		20.5	100%
NR TDD SRS 3	41	E	13.0	13.0		17.0	100%
NR TDD SRS 0 PC3	48	Sub 2	16.0	19.0		22.5	100%
NR TDD SRS 1	48	C	13.5	16.0		19.5	100%
NR TDD SRS 2	48	I	13.5	16.0		20.0	100%
NR TDD SRS 3	48	D	13.5	15.0		18.5	100%
NR FDD	66	MAIN 1	31.4	18.0		23.5	100%
NR FDD	66	Sub 2	17.0	20.0		23.5	100%
NR FDD	70	MAIN 1	33.4	19.0		23.0	100%
NR FDD	70	Sub 2	17.5	20.0		23.0	100%
NR FDD	71	MAIN 1	36.6	27.2		24.0	100%
NR FDD	71	Sub 1	21.0	26.0		24.0	100%
NR TDD SRS 0 PC2	77	Sub 2	16.0	17.0		26.0	100%
NR TDD SRS 0 PC2	78	Sub 2	16.0	19.0		26.0	100%
NR TDD SRS 1	77/78 DoD	C	14.5	16.5		20.5	100%
NR TDD SRS 2	77/78 DoD	I	12.5	16.5		23.0	100%
NR TDD SRS 3	77/78 DoD	D	14.5	16.5		19.5	100%
NR TDD SRS 0 PC2	77 DoD	Sub 2	16.0	17.0		26.0	100%
NR TDD SRS 0 PC2	78 DoD	Sub 2	16.0	19.0		26.0	100%
NR TDD SRS 1	77/78 DoD	C	14.5	16.5		20.5	100%
NR TDD SRS 2	77/78 DoD	I	12.5	16.5		23.0	100%
NR TDD SRS 3	77/78 DoD	D	14.5	16.5		21.0	100%
WLAN	2.4	Sub 4	13.0	20.6		19.0	100%
WLAN	2.4	Sub 6	13.0	21.9		19.0	100%
WLAN	5	Sub 4	12.0	15.0		17.0	100%
WLAN	5	Sub 1	12.0	15.0		17.0	100%
WLAN	6	Sub 4	8.0	8.0		15.0	100%
WLAN	6	Sub 1	8.0	8.0		15.0	100%
BT	2.4	Sub 4	21.2	22.3		17.0	100%
BT	2.4	Sub 6	23.7	24.6		18.0	100%

*Note all P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of 2G/4G TDD modulation schemes (for e.g., GSM,TDD).
*Maximum tune up output power Pmax is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.
The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G WWAN technology, band, and DSI = minimum of "Plimit EFS" and "Maximum tune up output power Pmax" + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D04v01.

4.3 Nominal Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D04v01.

4.3.1 3G/4G/5G Nominal Output Power

A. GSM Modes

(Tolerance: Nominal Power -1.5 dB ~ Nominal Power +1.0 dB)

GSM/GPRS/EDGE 850_Antenna E : Nominal Power									
Power Level	Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
	1 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot
Pmax	**33.5**	**33.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**24.5**	**24.5**
DSI = 0 (Non Head)	**33.5**	**33.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**24.5**	**24.5**
DSI = 1 (Head)	**30.2**	**30.2**	**27.2**	**25.4**	**24.2**	**27.0**	**25.0**	**24.5**	**24.2**
GSM/GPRS/EDGE 850_Antenna A: Nominal Power									
Power Level	Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
	1 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot
Pmax	**33.5**	**33.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**24.5**	**24.0**
DSI = 0 (Non Head)	**33.5**	**33.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**24.5**	**24.0**
DSI = 1 (Head)	**33.5**	**33.5**	**31.5**	**29.5**	**27.5**	**27.0**	**25.0**	**24.5**	**24.0**
GSM/GPRS/EDGE 1900_Antenna A: Nominal Power									
Power Level	Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in dBm)			
	1 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot	1 TX Slot	2 TX Slot	3 TX Slot	4 TX Slot
Pmax	**30.0**	**30.0**	**27.5**	**25.5**	**24.0**	**25.0**	**24.0**	**23.5**	**23.0**
DSI = 0 (Non Head)	**28.0**	**28.0**	**25.0**	**23.2**	**22.0**	**25.0**	**24.0**	**23.2**	**22.0**
DSI = 1 (Head)	**30.0**	**30.0**	**27.5**	**25.5**	**24.0**	**25.0**	**24.0**	**23.5**	**23.0**

B. UMTS Modes

(Tolerance: Nominal Power -1.5 dB ~ Nominal Power +1.0 dB)

UMTS Band 5 (850 MHz)_Antenna E: Nominal Power				
Power Level	Modulated Average Output Power (in dBm)			
	3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	**24.5**	**23.5**	**23.5**	**23.5**
DSI = 0 (Non Head)	**24.5**	**23.5**	**23.5**	**23.5**
DSI = 1(Head)	**21.0**	**20.0**	**20.0**	**20.0**
UMTS Band 5 (850 MHz)_Antenna A: Nominal Power				
Power Level	Modulated Average Output Power (in dBm)			
	3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	**24.5**	**23.5**	**23.5**	**23.5**
DSI = 0 (Non Head)	**24.5**	**23.5**	**23.5**	**23.5**
DSI = 1(Head)	**24.5**	**23.5**	**23.5**	**23.5**
UMTS Band 4 (1750 MHz)_Antenna A: Nominal Power				
Power Level	Modulated Average Output Power (in dBm)			
	3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	**22.8**	**21.8**	**21.8**	**21.8**
DSI = 0 (Non Head)	**19.0**	**18.0**	**18.0.**	**18.0**
DSI = 1(Head)	**22.8**	**21.8**	**21.8**	**21.8**
UMTS Band 2 (1900 MHz) Antenna A: Nominal Power				
Power Level	Modulated Average Output Power (in dBm)			
	3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	**23.8**	**22.8**	**22.8**	**22.8**
DSI = 0 (Non Head)	**18.5**	**17.5**	**17.5**	**17.5**
DSI = 1(Head)	**23.8**	**22.8**	**22.8**	**22.8**

C. LTE Modes

(Tolerance: Nominal Power -1.5 dB ~ Nominal Power +1.0 dB)

Mode / Band	Antenna	Modulated Average Output Power (in dBm) Nominal Power		
		Pmax	DSI = 0 (Non Head)	DSI = 1 (Head)
LTE Band 71	A	24.0	24.0	24.0
LTE Band 71_ASDIV	E	24.0	24.0	21.0
LTE Band 12	A	24.0	24.0	24.0
LTE Band 12_ASDIV	E	24.0	24.0	21.0
LTE Band 13	A	24.0	24.0	24.0
LTE Band 13_ASDIV	E	24.0	24.0	21.0
LTE Band 14	A	24.0	24.0	24.0
LTE Band 14_ASDIV	E	24.0	24.0	21.0
LTE Band 26 (Cell)	E	24.0	24.0	21.0
LTE Band 26 (Cell)_ASDIV	A	24.0	24.0	24.0
LTE Band 5 (Cell)	E	24.0	24.0	21.0
LTE Band 5 (Cell)_ASDIV	A	24.0	24.0	24.0
LTE Band 66 (AWS)	A	23.5	18.5	23.5
LTE Band 66 (AWS)_HOPPING	F	23.5	20.0	18.0
LTE Band 4 (AWS)	A	23.5	18.5	23.5
LTE Band 4 (AWS)_HOPPING	F	23.5	20.0	18.0
LTE Band 25 (PCS)	A	23.5	18.0	23.5
LTE Band 25 (PCS)_HOPPING	F	23.5	20.0	18.0
LTE Band 2 (PCS)	A	23.5	18.0	23.5
LTE Band 2 (PCS)_HOPPING	F	23.5	20.0	18.0
LTE Band 30	F	22.0	20.0	16.5
LTE Band 30_HOPPING	A	22.5	19.0	22.5
LTE Band 7	B	23.0	20.0	23.0
LTE Band 7_HOPPING	F	23.0	19.5	15.5
LTE Band 48	F	22.5	21.0	18.0
LTE Band 41 (PC3)	B	24.0	22.0	20.4
LTE Band 41 (PC2)	B	25.7	23.6	22.0
LTE Band 41 (PC3) _HOPPING	F	24.0	19.0	17.5
LTE Band 41 (PC2) _HOPPING	F	25.7	20.6	19.1
LTE Band 38	B	24.0	22.0	24.0
LTE Band 38_HOPPING	F	24.0	21.0	19.0

D. 5G NR SUB 6

(Tolerance: Nominal Power -1.5 dB ~ Nominal Power +1.0 dB)

Mode / Band	Antenna	Modulated Average Output Power (in dBm) Nominal Power		
		Pmax	DSI = 0 (Non Head)	DSI = 1 (Head)
NR Band n71	A	24	24	24
NR Band n71_ASDIV	E	24	24	21
NR Band n12	A	24	24	24
NR Band n12_ASDIV	E	24	24	21
NR Band n26/n5	E	24	24	21
NR Band n26/n5_ASDIV	A	24	24	24
NR Band n66	A	23.5	18	23.5
NR Band n66_HOPPING	F	23.5	20	17.0
NR Band n25	A	23.5	19	23.5
NR Band n25_HOPPING	F	23.5	20	18
NR Band n2 (PCS)	A	23.5	19	23.5
NR Band n2 (PCS) _HOPPING	F	23.5	20	18
NR Band n70	A	23	19	23
NR Band n70_HOPPING	F	23	20	17.5
NR Band n30	F	22	20	17
NR Band n30_HOPPING	A	22.5	19	22.5
NR Band n7	B	23	20	23
NR Band n7_HOPPING	F	23	20	16
NR Band n41 Path 1 (PC2 only)	F	26	19	17
NR Band n41 Path 1 (PC2 only)	B	22.5	20	22
NR Band n41 Path 1 (PC2 only)	E	20	16	16.5
NR Band n41 Path 1 (PC2 only)	D	19	19	16.5
NR Band n41 Path 2 (PC2 only)_HOPPING	B	26	20	24
NR Band n41 Path 2 (PC2 only)_HOPPING	F	21	19	16
NR Band n41 Path 2 (PC2 only)_HOPPING	D	20.5	18.5	19
NR Band n41 Path 2 (PC2 only)_HOPPING	E	17	13	13
NR Band n38 (PC3 only)	F	24	19	17
NR Band n38 (PC3 only)_HOPPING	B	24	20	24
NR Band n48 (PC3 only)	F	22.5	19	16
NR Band n48 (PC3 only)	C	19.5	16	13.5
NR Band n48 (PC3 only)	I	20	16.5	13.5
NR Band n48 (PC3 only)	D	18.5	15	13.5
NR Band n77 DoD (PC2 only)	F	26	19	16
NR Band n77 DoD (PC2 only)	C	20.5	16.5	14.5
NR Band n77 DoD (PC2 only)	I	23	16.5	12.5
NR Band n77 DoD (PC2 only)	D	19.5	16.5	14.5
NR Band n77 (PC2 only)	F	26	19	16
NR Band n77 (PC2 only)	C	20.5	16.5	14.5
NR Band n77 (PC2 only)	I	23	16.5	12.5
NR Band n77 (PC2 only)	D	19.5	16.5	14.5
NR Band n78 (PC2 only)	F	26	19	16
NR Band n78 (PC2 only)	C	20.5	16.5	14.5
NR Band n78 (PC2 only)	I	23	16.5	12.5
NR Band n78 (PC2 only)	D	19.5	16.5	14.5

4.4.2 Maximum 2.4 GHz, 5 GHz, 6 GHz WIFI output power

a. Maximum Power (Pmax)- Nominal Power

Mode	Band	SISO(ANT 1)							SISO(ANT 2)							MIMO						
		a	b	g	n	ac	ax (SU)	be (SU)	a	b	g	n	ac	ax (SU)	be (SU)	a	b	g	n	ac	ax(SU)	be(SU)
2.4GHz	2.45GHz		19	17	17	17	15			19	17	17	17	15			22	20	20	20	18	
5GHZ (20MHz)	UNII 1	17			17	17	15		17			17	17	15		20			20	20	18	
	UNII 2A	17			17	17	15		17			17	17	15		20			20	20	18	
	UNII 2C	17			17	17	15		17			17	17	15		20			20	20	18	
	UNII 3	17			17	17	15		17			17	17	15		20			20	20	18	
	UNII 4	17			17	17	15		17			17	17	15		20			20	20	18	
5GHZ (40MHz)	UNII 1				15	15	15 Ch38:13					15	15	15 Ch38:13					18	18	18 Ch38:16	
	UNII 2A				15	15	15 Ch62:13					15	15	15 Ch62:13					18	18	18 Ch62:16	
	UNII 2C				15	15	15					15	15	15					18	18	18	
	UNII 3				15	15	15					15	15	15					18	18	18	
	UNII 4				15	15	15					15	15	15					18	18	18	
5GHZ (80MHz)	UNII 1					14	14						14	14						17	17	
	UNII 2A					14	14						14	14						17	17	
	UNII 2C					14	14						14	14						17	17	
	UNII 3					14	14						14	14						17	17	
	UNII 4					14	14						14	14						17	17	
5GHz (160MHz)	UNII 1&2A					13	13						13	13						16	16	
	UNII 2C					13	13						13	13						16	16	
	UNII 3&4					13	13						13	13						16	16	
6GHz_LPI (20MHz)	U-NII-5	7.5					7.5		7.5					7.5		10.5					10.5	
	U-NII-6	10					10		10					10		13					13	
	U-NII-7	10					10		10					10		13					13	
	U-NII-8	10					10		10					10		13					13	
6GHz_LPI (40MHz)	U-NII-5						10							10							13	
	U-NII-6						11							11							14	
	U-NII-7						11							11							14	
	U-NII-8						11							11							14	
6GHz_LPI (80MHz)	U-NII-5						11							11							14	
	U-NII-6						11							11							14	
	U-NII-7						11							11							14	
	U-NII-8						11							11							14	
6GHz_LPI (160MHz)	U-NII-5						11							11							14	
	U-NII-6						11							11							14	
	U-NII-7						11							11							14	
	U-NII-8						11							11							14	
6GHz_SP (20MHz)	U-NII-5	15 2ch-10					15 2ch-9		15 2ch-10					15 2ch-9		18 2ch-13					18 2ch-12	
	U-NII-7	15					15		15					15		18					18	
6GHz_SP (40MHz)	U-NII-5						15							15							18	
	U-NII-7						15							15							18	
6GHz_SP (80MHz)	U-NII-5						15							15							18	
	U-NII-7						15							15							18	
6GHz_SP (160MHz)	U-NII-5						15							15							18	
	U-NII-7						15							15							18	

(Upper tolerance: Nominal Power +1.0 dB)

b. Nominal Power Plimit – Body SAR: (DSI = 0)

Mode	Band	SISO(ANT 1)							SISO(ANT 2)							MIMO						
		a	b	g	n	ac	ax (SU)	Be (SU)	a	b	g	n	ac	ax (SU)	be (SU)	a	b	g	n	ac	ax(SU)	be(SU)
2.4GHz	2.45GHz		19	17	17	17	15			19	17	17	17	15			22	20	20	20	18	
i5GHZ (20MHz)	UNII 1	15			15	15	15		15			15	15	15		18			18	18	18	
	UNII 2A	15			15	15	15		15			15	15	15		18			18	18	18	
	UNII 2C	15			15	15	15		15			15	15	15		18			18	18	18	
	UNII 3	15			15	15	15		15			15	15	15		18			18	18	18	
	UNII 4	15			15	15	15		15			15	15	15		18			18	18	18	
5GHZ (40MHz)	UNII 1				15	15	15 Ch38:13					15	15	15 Ch38:13					18	18	18 Ch38:16	
	UNII 2A				15	15	15 Ch38:13					15	15	15 Ch38:13					18	18	18 Ch38:16	
	UNII 2C				15	15	15					15	15	15					18	18	18	
	UNII 3				15	15	15					15	15	15					18	18	18	
	UNII 4				15	15	15					15	15	15					18	18	18	
5GHZ (80MHz)	UNII 1					14	14						14	14						17	17	
	UNII 2A					14	14						14	14						17	17	
	UNII 2C					14	14						14	14						17	17	
	UNII 3					14	14						14	14						17	17	
	UNII 4					14	14						14	14						17	17	
5GHz (160MHz)	UNII 1&2A					13	13						13	13						16	16	
	UNII 2C					13	13						13	13						16	16	
	UNII 3&4					13	13						13	13						16	16	
6GHz_LPI (20MHz)	U-NII-5	7.5					7.5		7.5					7.5		10.5					10.5	
	U-NII-6	8					8		8					8		11					11	
	U-NII-7	8					8		8					8		11					11	
	U-NII-8	8					8		8					8		11					11	
6GHz_LPI (40MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_LPI (80MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_LPI (160MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_SP (20MHz)	U-NII-5	8					8		8					8		11					11	
	U-NII-7	8					8		8					8		11					11	
6GHz_SP (40MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	
6GHz_SP (80MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	
6GHz_SP (160MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	

(Upper tolerance: Nominal Power +1.0 dB)

c. Nominal Power Plimit – Head SAR (DSI = 1)

Mode	Band	SISO(ANT 1)							SISO(ANT 2)							MIMO						
		a	b	g	n	ac	ax (SU)	be (SU)	a	b	g	n	ac	ax (SU)	be (SU)	a	b	g	n	ac	ax(SU)	be(SU)
2.4GHz	2.45GHz		13	13	13	13	13			13	13	13	13	13			16	16	16	16	16	
5GHZ (20MHz)	UNII 1	12			12	12	12		12			12	12	12		15			15	15	15	
	UNII 2A	12			12	12	12		12			12	12	12		15			15	15	15	
	UNII 2C	12			12	12	12		12			12	12	12		15			15	15	15	
	UNII 3	12			12	12	12		12			12	12	12		15			15	15	15	
	UNII 4	12			12	12	12		12			12	12	12		15			15	15	15	
5GHZ (40MHz)	UNII 1				12	12	12					12	12	12					15	15	15	
	UNII 2A				12	12	12					12	12	12					15	15	15	
	UNII 2C				12	12	12					12	12	12					15	15	15	
	UNII 3				12	12	12					12	12	12					15	15	15	
	UNII 4				12	12	12					12	12	12					15	15	15	
5GHZ (80MHz)	UNII 1					12	12						12	12						15	15	
	UNII 2A					12	12						12	12						15	15	
	UNII 2C					12	12						12	12						15	15	
	UNII 3					12	12						12	12						15	15	
	UNII 4					12	12						12	12						15	15	
5GHz (160MHz)	UNII 1&2A					12	12						12	12						15	15	
	UNII 2C					12	12						12	12						15	15	
	UNII 3&4					12	12						12	12						15	15	
6GHz_LPI (20MHz)	U-NII-5	7.5					7.5		7.5					7.5		10.5					10.5	
	U-NII-6	8					8		8					8		11					11	
	U-NII-7	8					8		8					8		11					11	
	U-NII-8	8					8		8					8		11					11	
6GHz_LPI (40MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_LPI (80MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_LPI (160MHz)	U-NII-5						8							8							11	
	U-NII-6						8							8							11	
	U-NII-7						8							8							11	
	U-NII-8						8							8							11	
6GHz_SP (20MHz)	U-NII-5	8					8		8					8		11					11	
	U-NII-7	8					8		8					8		11					11	
6GHz_SP (40MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	
6GHz_SP (80MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	
6GHz_SP (160MHz)	U-NII-5						8							8							11	
	U-NII-7						8							8							11	

(Upper tolerance: Nominal Power +1.0 dB)

d. 802.11ax_RU Tx power Tables Plimit (Pmax) Nominal Power

	MIMO /in dBm														
Tones	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	5G/160Mhz	6G/20Mhz LPI	6G/40Mhz LPI	6G/80Mhz LPI	6G/160Mhz LPI	6G/320Mhz LPI	6G/20Mhz SP	6G/40Mhz SP	6G/80Mhz SP	6G/160Mhz SP	6G/320Mhz SP
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	16	13	13	13	13	4 UNII5 : 2	4 UNII5 : 2	4 UNII5 : 2	4 UNII5 : 2		12 Ch2: 6	12	12	12	
52T	17	15.5	15.5	15.5	15.5	4.5	4.5	4.5	4.5		12 Ch2: 8	12	12	12	
106T	18	18	18	18	18	10 UNII5 : 5.5	10 UNII5 : 5.5	10 UNII5 : 5.5	10 UNII5 : 5.5		12 Ch2: 10	12	12	12	
242T	18	19 Ch36:18 Ch64:18	19	19 Ch42:18 Ch58:18	19 80L ch50:16	13 UNII5 : 10.5	12 UNII5 : 10.5	12 UNII5 : 10.5	12 UNII5 : 10.5		18 Ch2: 13	12	12	12	
484T			18 Ch38:16 Ch62:16 Ch102:17	18 Ch42:17 Ch58:17	18 80L ch50:17 80U ch50:16		14 UNII5 : 13	12	12			18	12	12	
996T				17 Ch58:16	17 80L ch50:16 80U ch50:16			14	12				18	12	
996Tx2					16				14					18	
996Tx4															

(Upper tolerance: Nominal Power +1.0 dB)

	SISO /in dBm **(ANT1=ANT2)**														
Tones	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	5G/160Mhz	6G/20Mhz LPI	6G/40Mhz LPI	6G/80Mhz LPI	6G/160Mhz LPI	6G/320Mhz LPI	6G/20Mhz SP	6G/40Mhz SP	6G/80Mhz SP	6G/160Mhz SP	6G/320Mhz SP
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	13	10	10	10	10	1 UNII5 : -1	1 UNII5 : -1	1 UNII5 : -1	1 UNII5 : -1		9 Ch2: 3	9	9	9	
52T	14	12.5	12.5	12.5	12.5	1.5	1.5	1.5	1.5		9 Ch2: 5	9	9	9	
106T	15	15	15	15	15	7 UNII5 : 2.5	7 UNII5 : 2.5	7 UNII5 : 2.5	7 UNII5 : 2.5		9 Ch2: 7	9	9	9	
242T	15	16 Ch36:15 Ch64:15	16	16 Ch42:15 Ch58:15	16 80L ch50:13	10 UNII5 : 7.5	9 UNII5 : 7.5	9 UNII5 : 7.5	9 UNII5 : 7.5		15 Ch2: 10	9	9	9	
484T			15 Ch38:13 Ch62:13 Ch102:14	15 Ch42:14 Ch58:14	15 80L ch50:14 80U ch50:13		11 UNII5 : 10	9	9			15	9	9	
996T				14 Ch58:13	14 80L ch50:13 80U ch50:13			11	9				15	9	
996Tx2					13				11					15	
996Tx4															

(Upper tolerance: t Nominal Power +1.0 dB)

e. 802.11ax_RU Tx power Tables Plimit Nominal Power – Body SAR (DSI = 0)

Tones	MIMO /in dBm														
	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	5G/160Mhz	6G/20Mhz LPI	6G/40Mhz LPI	6G/80Mhz LPI	6G/160Mhz LPI	6G/320Mhz LPI	6G/20Mhz SP	6G/40Mhz SP	6G/80Mhz SP	6G/160Mhz SP	6G/320Mhz SP
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	16	13	13	13	13	4 UNII5 : 2	4 UNII5 : 2	4 UNII5 : 2	4 UNII5 : 2		11	11	11	11	
52T	17	15.5	15.5	15.5	15.5	4.5	4.5	4.5	4.5		11	11	11	11	
106T	18	18	18	17	16	10 UNII5 : 5.5	10 UNII5 : 5.5	10 UNII5 : 5.5	10 UNII5 : 5.5		11	11	11	11	
242T	18	18	18	17	16	11 UNII5 : 10.5	11 UNII5 : 10.5	11 UNII5 : 10.5	11 UNII5 : 10.5		11	11	11	11	
484T			18	17	16		11 UNII5 : 11	11 UNII5 : 11	11 UNII5 : 11			11	11	11	
996T				17	16			11	11				11	11	
996Tx2					16				11					11	
996Tx4															

(Upper tolerance: Nominal Power +1.0 dB)

Tones	SISO /in dBm (ANT1=ANT2)														
	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz	5G/160Mhz	6G/20Mhz LPI	6G/40Mhz LPI	6G/80Mhz LPI	6G/160Mhz LPI	6G/320Mhz LPI	6G/20Mhz SP	6G/40Mhz SP	6G/80Mhz SP	6G/160Mhz SP	6G/320Mhz SP
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	13	10	10	10	10	1 UNII5 : -1	1 UNII5 : -1	1 UNII5 : -1	1 UNII5 : -1		8	8	8	8	
52T	14	12.5	12.5	12.5	12.5	1.5	1.5	1.5	1.5		8	8	8	8	
106T	15	15	15	14	13	7 UNII5 : 2.5	7 UNII5 : 2.5	7 UNII5 : 2.5	7 UNII5 : 2.5		8	8	8	8	
242T	15	15	15	14	13	8 UNII5 : 7.5	8 UNII5 : 7.5	8 UNII5 : 7.5	8 UNII5 : 7.5		8	8	8	8	
484T			15	14	13		8 UNII5 : 8	8 UNII5 : 8	8 UNII5 : 8			8	8	8	
996T				14	13			8	8				8	8	
996Tx2					13				8					8	
996Tx4															

(Upper tolerance: Nominal Power target +1.0 dB)

f. 802.11ax_be RU Plimit Nominal Power Tables – Head SAR (DSI = 1)

Tones	MIMO /in dBm														
	2.4G	*5G/20Mhz*	*5G/40Mhz*	*5G/80Mhz*	*5G/160Mhz*	*6G/20Mhz LPI*	*6G/40Mhz LPI*	*6G/80Mhz LPI*	*6G/160Mhz LPI*	*6G/320Mhz LPI*	*6G/20Mhz SP*	*6G/40Mhz SP*	*6G/80Mhz SP*	*6G/160Mhz SP*	*6G/320Mhz SP*
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	16	13	13	13	13	**4 UNII5 : 2**	**4 UNII5 : 2**	**4 UNII5 : 2**	**4 UNII5 : 2**		**11**	**11**	**11**	**11**	
52T	16	15	15	15	15	**4.5**	**4.5**	**4.5**	**4.5**		**11**	**11**	**11**	**11**	
106T	16	15	15	15	15	**11 UNII5 : 5.5**	**10 UNII5 : 5.5**	**10 UNII5 : 5.5**	**10 UNII5 : 5.5**		**11**	**11**	**11**	**11**	
242T	16	15	15	15	15	**11 UNII5 : 10.5**	**11 UNII5 : 10.5**	**11 UNII5 : 10.5**	**11 UNII5 : 10.5**		**11**	**11**	**11**	**11**	
484T			15	15	15		**11 UNII5 : 11**	**11 UNII5 : 11**	**11 UNII5 : 11**			**11**	**11**	**11**	
996T				15	15			**11**	**11**				**11**	**11**	
996Tx2					15				**11**					**11**	
996Tx4															

(Upper tolerance: Nominal Power +1.0dB)

Tones	SISO /in dBm **(ANT1=ANT2)**														
	2.4G	*5G/20Mhz*	*5G/40Mhz*	*5G/80Mhz*	*5G/160Mhz*	*6G/20Mhz LPI*	*6G/40Mhz LPI*	*6G/80Mhz LPI*	*6G/160Mhz LPI*	*6G/320Mhz LPI*	*6G/20Mhz SP*	*6G/40Mhz SP*	*6G/80Mhz SP*	*6G/160Mhz SP*	*6G/320Mhz SP*
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	**13**	**10**	**10**	**10**	**10**	**1 UNII5 : -1**	**1 UNII5 : -1**	**1 UNII5 : -1**	**1 UNII5 : -1**		**8**	**8**	**8**	**8**	
52T	**13**	**12**	**12**	**12**	**12**	**1.5**	**1.5**	**1.5**	**1.5**		**8**	**8**	**8**	**8**	
106T	**13**	**12**	**12**	**12**	**12**	**7 UNII5 : 2.5**	**7 UNII5 : 2.5**	**7 UNII5 : 2.5**	**7 UNII5 : 2.5**		**8**	**8**	**8**	**8**	
242T	**13**	**12**	**12**	**12**	**12**	**8 UNII5 : 7.5**	**8 UNII5 : 7.5**	**8 UNII5 : 7.5**	**8 UNII5 : 7.5**		**8**	**8**	**8**	**8**	
484T			**12**	**12**	**12**		**8 UNII5 : 8**	**8 UNII5 : 8**	**8 UNII5 : 8**			**8**	**8**	**8**	
996T				**12**	**12**			**8**	**8**				**8**	**8**	
996Tx2					**12**				**8**					**8**	
996Tx4															

(Upper tolerance: Nominal Power +1.0 dB)

4.4.3 Maximum Bluetooth Power

a. Maximum (Pmax Nominal Power)

MODE	DATA RATE	SISO		Dual TX
		ANT1 (Core0)	ANT2 (Core1)	
BDR(in dBm)	1Mbps	**18**	**19**	**17**
EDR(in dBm)	2Mbps	14	15	12
	3Mbps	13	14	12
LE	1M	**18**	**19**	**17**
	2M	**18**	**19**	**17**
	125K	9	11	Not Support
	500k	9	11	Not Support

(Upper tolerance: Nominal Power +1.0 dB)

b. Plimit Nominal Power : Body SAR (Receiver Active ,DSI = 0)

MODE	DATA RATE	SISO		Dual TX
		ANT1 (Core0)	ANT2 (Core1)	
BDR(in dBm)	1Mbps	18	19	**17**
EDR(in dBm)	2Mbps	14	15	12
	3Mbps	13	14	12
LE	1M	18	19	**17**
	2M	18	19	**17**
	125K	9	11	Not Support
	500k	9	11	Not Support

(Upper tolerance: Nominal Power +1.0dB)

4.5 LTE Information

Item.		Description
Frequency Range	LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz
	LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz
	LTE FDD Band 5 (Cell)	824.7 MHz ~ 848.3 MHz
	LTE FDD Band 7	2 502.5 MHz ~ 2 567.5 MHz
	LTE FDD Band 12	699.7 MHz ~ 715.3 MHz
	LTE FDD Band 13	779.5 MHz ~ 784.5 MHz
	LTE FDD Band 14	790.5 MHz ~ 795.5 MHz
	LTE FDD Band 25	1 850.7 MHz ~ 1 914.3 MHz
	LTE FDD Band 26	814.7 MHz ~ 848.3 MHz
	LTE FDD Band 30	2 307.5 MHz ~ 2 312.5 MHz
	LTE TDD Band 38	2 572.5 MHz ~ 2 617.5 MHz
	LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz
	LTE TDD Band 48	3 552.5 MHz ~ 3 697.5 MHz
	LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz
	LTE FDD Band 71	665.5 MHz ~ 695.5 MHz
Channel Bandwidths	LTE FDD Band 2 (PCS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 4 (AWS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 5 (Cell)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE FDD Band 7	5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 12	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE FDD Band 13	5 MHz, 10 MHz
	LTE FDD Band 14	5 MHz, 10 MHz
	LTE FDD Band 25	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 26	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz
	LTE FDD Band 30	5 MHz, 10 MHz
	LTE TDD Band 38	5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE TDD Band 41	5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE TDD Band 48	5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 66 (AWS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 71	5 MHz, 10 MHz, 15 MHz, 20 MHz

Ch. No.& Freq.(MHz)		Low / Low-Mid	Mid	Mid-High / High
LTE FDD Band 2 (PCS)	1.4 MHz	1 850.7 (18607)	1 880.0 (18900)	1 909.3 (19193)
	3 MHz	1 851.5 (18615)	1 880.0 (18900)	1 908.5 (19185)
	5 MHz	1 852.5 (18625)	1 880.0 (18900)	1 907.5 (19175)
	10 MHz	1 855.0 (18650)	1 880.0 (18900)	1 905.0 (19150)
	15 MHz	1 857.5 (18675)	1 880.0 (18900)	1 902.5 (19125)
	20 MHz	1 860.0 (18700)	1 880.0 (18900)	1 900.0 (19100)
LTE FDD Band 4 (AWS)	1.4 MHz	1 710.7 (19957)	1 732.5 (20175)	1 754.3 (20393)
	3 MHz	1 711.5 (19965)	1 732.5 (20175)	1 753.5 (20385)
	5 MHz	1 712.5 (19975)	1 732.5 (20175)	1 752.5 (20375)
	10 MHz	1 715.0 (20000)	1 732.5 (20175)	1 750.0 (20350)
	15 MHz	1 717.5 (20025)	1 732.5 (20175)	1 747.5 (20325)
	20 MHz	1 720.0 (20050)	1 732.5 (20175)	1 745.0 (20300)
LTE FDD Band 5 (Cell)	1.4 MHz	824.7 (20407)	836.5 (20525)	848.3 (20643)
	3 MHz	825.5 (20415)	836.5 (20525)	847.5 (20635)
	5 MHz	826.5 (20425)	836.5 (20525)	846.5 (20625)
	10 MHz	829.0 (20450)	836.5 (20525)	844.0 (20600)
LTE FDD Band 7	5 MHz	2 502.5 (20775)	2 535 (21100)	2 567.5 (21425)
	10 MHz	2 505 (20800)	2 535 (21100)	2 565 (21400)
	15 MHz	2 507.5 (20825)	2 535 (21100)	2 562.5 (21375)
	20 MHz	2 510 (20850)	2 535 (21100)	2 560 (21350)
LTE FDD Band 12	1.4 MHz	699.7 (23017)	707.5 (23095)	715.3 (23173)
	3 MHz	700.5 (23025)	707.5 (23095)	714.5 (23165)
	5 MHz	701.5 (23035)	707.5 (23095)	713.5 (23155)
	10 MHz	704.0 (23060)	707.5 (23095)	711.0 (23130)
LTE FDD Band 13	5 MHz	779.5 (23205)	782 (23230)	784.5 (23255)
	10 MHz		782 (23230)	
LTE FDD Band 14	5 MHz	790.5 (23305)	793 (23330)	795.5 (23355)
	10 MHz		793 (23330)	
LTE FDD Band 25(PCS)	1.4 MHz	1 850.7 (26047)	1 882.5 (26365)	1 914.3 (26683)
	3 MHz	1 851.5 (26055)	1 882.5 (26365)	1 913.5 (26675)
	5 MHz	1 852.5 (26065)	1 882.5 (26365)	1 912.5 (26665)
	10 MHz	1 855 (26090)	1 882.5 (26365)	1 910 (26640)
	15 MHz	1 857.5 (26115)	1 882.5 (26365)	1 907.5 (26615)
	20 MHz	1 860 (26140)	1 882.5 (26365)	1 905 (26590)
LTE FDD Band 26 (Cell)	1.4 MHz	814.7 (26697)	831.5 (26865)	848.3 (27033)
	3 MHz	815.5 (26705)	831.5 (26865)	847.5 (27025)
	5 MHz	816.5 (26715)	831.5 (26865)	846.5 (27015)
	10 MHz	819.0 (26740)	831.5 (26865)	844.0 (26990)
	15 MHz	821.5 (26765)	831.5 (26865)	841.5 (26965)
LTE FDD Band 30	5 MHz	2 307.5 (27685)	2 310 (27710)	2 312.5 (27735)
	10 MHz		2 310 (27710)	
LTE TDD Band 38	5 MHz	2 572.5 (37775)	2 595 (38000)	2 617.5 (38225)
	10 MHz	2 575 (37800)	2 595 (38000)	2 615 (38200)
	15 MHz	2 577.5 (37825)	2 595 (38000)	2 612.5 (38175)
	20 MHz	2 580 (37850)	2 595 (38000)	2 610 (38150)

Ch. No.& Freq.(㎒)		Low / Low-Mid		Mid		Mid-High / High	
LTE FDD Band 66 (AWS)	1.4 ㎒	1 710.7 (131979)		1 745 (132322)		1 779.3 (132665)	
	3 ㎒	1 711.5 (131987)		1 745 (132322)		1 778.5 (132657)	
	5 ㎒	1 712.5 (131997)		1 745 (132322)		1 777.5 (132647)	
	10 ㎒	1 715.0 (132022)		1 745 (132322)		1 775.0 (132622)	
	15 ㎒	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)	
	20 ㎒	1 720.0 (132072)		1 745 (132322)		1 770.0 (132572)	
LTE FDD Band 71	5 ㎒	665.5 (133147)		680.5 (133297)		695.5 (133447)	
	10 ㎒	668 (133172)		680.5 (133297)		693 (133422)	
	15 ㎒	670.5 (133197)		680.5 (133297)		690.5 (133397)	
	20 ㎒	673 (133222)		680.5 (133297)		688 (133372)	
LTE TDD Band 41	5 ㎒	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	10 ㎒	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	15 ㎒	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	20 ㎒	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
LTE TDD Band 48	5 ㎒	3 552.5(55265)	3 600.8(55748)	3 649.2(56232)	3 697.5(56715)		
	10 ㎒	3 555(55290)	3 601.7(55757)	3 648.3(56223)	3 695(56690)		
	15 ㎒	3 557.5(55315)	3 602.5(55765)	3 647.5(56215)	3 692.5(56665)		
	20 ㎒	3 560(55340)	3 603.3(55773)	3 646.7(56207)	3 690(56640)		

UE Category	LTE Rel. 16, DL: Category 18, UL: Category 18
HPUE Power Class	LTE TDD 41 Power Class 3 :(Duty: 63.3%) Power Class 2 : (Duty:43.3%)
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256 QAM
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3	Yes
A-MPR disabled for SAR Testing.	Yes
LTE Carrier Aggregation	This device supports Inter-Band & Intra-Band DL-link Carrier aggregations and intra-Band UL-link Carrier aggregations. Detaled information of Down-Link CA are included in the Appendix.I and Technical Description document.
LTE Release information	This device does not support full CA features on 3GPP Release 15. It supports carrieraggregation, downlink MIMO. All other uplink communications are identical to the release 8 specifications. The following LTE Release 15 Features are not supported: Relay, Hetnet, Enhanced elCl, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.

4.6 5G NR SUB 6 Information

Item.		Description
Frequency Range	NR FDD Band n2 (PCS)	1 852.5 MHz ~ 1 907.5 MHz
	NR FDD Band n5	826.5 MHz ~ 846.5 MHz
	NR FDD Band n7	2502.5 MHz ~ 2567.5 MHz
	NR FDD Band n12	701.5 MHz ~ 713.5 MHz
	NR FDD Band n25 (PCS)	1 852.5 MHz ~ 1 912.5 MHz
	NR FDD Band n26	816.5 MHz ~ 846.5 MHz
	NR FDD Band n30	2 307.5 MHz ~ 2 312.5 MHz
	NR TDD Band n38	2 575 MHz ~ 2 615 MHz
	NR TDD Band n41	2 501.01 MHz ~ 2 685 MHz
	NR TDD Band n48	3 555 MHz ~ 3 695.01 MHz
	NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz
	NR FDD Band n70	1 697.5 MHz ~ 1 707.5 MHz
	NR FDD Band n71	665.5 MHz ~ 695.5 MHz
	NR TDD Band n77	3 705 MHz ~ 3 975 MHz
	NR TDD Band n77 DoD	3 445.01 MHz ~ 3 544.98 MHz
	NR TDD Band n78	3 705 MHz ~ 3 795 MHz
	NR TDD Band n78 DoD	3 455.01 MHz ~ 3 544.98 MHz
Channel Bandwidths	NR FDD Band n2 (PCS)	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR FDD Band n5	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR FDD Band n7	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR FDD Band n12	5 MHz, 10 MHz, 15 MHz
	NR FDD Band n25 (PCS)	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR FDD Band n26	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR FDD Band n30	5 MHz, 10 MHz
	NR TDD Band n38	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz
	NR TDD Band n41	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR TDD Band n48	10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz,
	NR FDD Band n66	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR FDD Band n70	5 MHz, 10 MHz, 15 MHz
	NR FDD Band n71	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR TDD Band n77	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR TDD Band n77 DoD	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR TDD Band n78	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR TDD Band n78 DoD	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz

Ch. No.& Freq.(MHz)		Low / Low-Mid	Mid	Mid-High / High
NR FDD Band n2 (PCS)	5 MHz	1852.5(370500)	1880(376000)	1907.5(381500)
	10 MHz	1855(371000)	1880(376000)	1905(381000)
	15 MHz	1857.5(371500)	1880(376000)	1902.5(380500)
	20 MHz	1860(372000)	1880(376000)	1900(380000)
	25 MHz	1862.5(372500)	1880(376000)	1897.5(379500)
	30 MHz	1865(373000)	1880(376000)	1895(379000)
	35 MHz	1867.5(373500)	1880(376000)	1892.5(378500)
	40 MHz	1870(374000)	1880(376000)	1890(378000)
NR FDD Band n5 (Cell)	5 MHz	826.5 (165300)	836.5(167300)	846.5 (169300)
	10 MHz	829 (165800)	836.5(167300)	844 (168800)
	15 MHz	831.5 (166300)	836.5(167300)	841.5 (168300)
	20 MHz	834 (166800)	836.5(167300)	839 (167800)
NR FDD Band n7	5 MHz	2502.5(500500)	2535(507000)	2567.5(513500)
	10 MHz	2505(501000)	2535(507000)	2565(513000)
	15 MHz	2507.5(501500)	2535(507000)	2562.5(512500)
	20 MHz	2510(502000)	2535(507000)	2560(512000)
	25 MHz	2512.5(502500)	2535(507000)	2557.5(511500)
	30 MHz	2515(503000)	2535(507000)	2555(511000)
	35 MHz	2517.5(503500)	2535(507000)	2552.5(510500)
	40 MHz	2520(504000)	2535(507000)	2550(510000)
NR FDD Band n12	5 MHz	701.5 (140300)	707.5 (141500)	713.5 (142700)
	10 MHz		707.5 (141500)	
	15 MHz		707.5 (141500)	
NR FDD Band n25	5 MHz	1852.5(370500)	1882.5(376500)	1912.5(382500)
	10 MHz	1855(371000)	1882.5(376500)	1910(382000)
	15 MHz	1857.5(371500)	1882.5(376500)	1907.5(381500)
	20 MHz	1860(372000)	1882.5(376500)	1905(381000)
	25 MHz	1862.5(372500)	1882.5(376500)	1902.5(380500)
	30 MHz	1865(373000)	1882.5(376500)	1900(380000)
	35 MHz	1867.5(373500)	1882.5(376500)	1897.5(379500)
	40 MHz	1870(374000)	1882.5(376500)	1895(379000)
NR FDD Band n26	5 MHz	816.5(163300)	831.5(166300)	846.5(169300)
	10 MHz	819(163800)	831.5(166300)	844(168800)
	15 MHz	821.5(164300)	831.5(166300)	841.5(168300)
	20 MHz	824(164800)	831.5(166300)	839(167800)
NR FDD Band n30	5 MHz		2310 (462000)	
	10 MHz		2310 (462000)	
NR TDD Band n38	10 MHz	2575(515000)	2595(519000)	2615(523000)
	15 MHz	2577.5(515500)	2595(519000)	2612.5(522500)
	20 MHz	2580(516000)	2595(519000)	2610(522000)
	25 MHz	2582.5(516500)	2595(519000)	2607.5(521500)
	30 MHz	2585(517000)	2595(519000)	2605(521000)
	40 MHz	2590(518000)	2595(519000)	2600(520000)
NR TDD Band n48	10 MHz	3555(637000)	3602.01(640134)	3648(643200)	3695.01(646334)
	15 MHz	3557.49(637166)	3602.49(640166)	3647.49(643166)	3692.49(646166)
	20 MHz	3560.01(637334)	3603.33(640222)	3646.65(643110)	3690(646000)
	30 MHz	3565.02 (637668)	3605.01(640334)	3645(643000)	3684.99(645666)
	40 MHz	3570(638000)	3624.99(641666)		3680.01(645334)
NR TDD Band n41	10 MHz	2501.01(500202)	2547(509400)	2592.99(518598)	2639.01(527802)	2685(537000)
	15 MHz	2503.5(500700)	2548.26(509652	2592.99(518598)	2637.75(527550)	2682.51(536502)
	20 MHz	2506.02(501204)	2549.49(509898)	2592.99(518598)	2636.49(527298)	2679.99(535998)
	25 MHz	2508.48(501696)	2550.75(510150)	2592.99(518598)	2635.23(527046)	2677.50(535500)
	30 MHz	2511(502200)	2552.01(510402)	2592.99(518598)	2634(526800)	2674.98(534996)
	40 MHz	2516.01(503202)	2567.34(513468)		2618.67(523734)	2670(534000)
	50 MHz	2521.02(504204)		2592.99(518598)		2664.99(532998)
	60 MHz	2526(505200)		2592.99(518598)		2659.98(531996)
	70 MHz	2531.01(506202)				2655(531000)
	80 MHz	2536.02(507204)				2649.99(529998)
	90 MHz	2541(508200)				2644.98(528996)
	100 MHz			2592.99(518598)		

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High	
NR FDD Band n66	5 MHz	1712.5(342500)		1745(349000)		1777.5(355500)	
	10 MHz	1715(343000)		1745(349000)		1775(355000)	
	15 MHz	1717.5(343500)		1745(349000)		1772.5(354500)	
	20 MHz	1720(344000)		1745(349000)		1770(354000)	
	25 MHz	1722.5(344500)		1745(349000)		1767.5(353500)	
	30 MHz	1725(345000)		1745(349000)		1765(353000)	
	35 MHz	1727.5(345500)		1745(349000)		1762.5(352500)	
	40 MHz	1730(346000)		1745(349000)		1760(352000)	
NR FDD Band n70	5 MHz	1697.5(339500)				1707.5(341500)	
	10 MHz	1700(340000)		1702.5(340500)		1705 (341000)	
	15 MHz			1702.5(340500)			
NR FDD Band n71	5 MHz	665.5(133100)		680.5(136100)		695.5(139100)	
	10 MHz	668(133600)		680.5(136100)		693(138600)	
	15 MHz	670.5(134100)		680.5(136100)		690.5(138100)	
	20 MHz	673(134600)		680.5(136100)		688(137600)	
NR TDD Band n77	10 MHz	3705(647000)	3759(650600)	3813(654200)	3867(657800)	3921(661400)	3975(665000)
	15 MHz	3707.52(647168)	3760.5(650700)	3813.51(654234	3866.49(657766)	3919.5(661300)	3972.48(664832)
	20 MHz	3710.01 (647334)	3762 (650800)	3813.99(654266)	3866.01 (657734)	3918 (661200)	3969.99 (664666)
	25 MHz	3712.5(647500)	3763.5(650900)	3814.5(654300)	3865.5(657700)	3916.5(661100)	3967.5(664500)
	30 MHz	3715.02 (647668)	3765 (651000)	3815.01(654334)	3864.99 (657666)	3915 (661000)	3964.98 (664332)
	40 MHz	3720 (648000)	3768 (651200)	3816 (654400)	3864 (657600)	3912 (660800)	3960 (664000)
	50 MHz	3725.01 (648334)	3782.49 (652166)	3840 (656000)		3897.51 (659834)	3954.99 (663666)
	60 MHz	3730.02 (648668)	3803.34(653556)			3876.66(658444)	3949.98 (663332)
	70 MHz	3735 (649000)	3804.99 (654336)			3875.01 (658334)	3945(663000)
	80 MHz	3740.01 (649334)		3840 (656000)			3939.99 (662666)
	90 MHz	3745.02 (649668)		3840 (656000)		3934.98 (662332)	
	100 MHz	3750 (650000)		3840 (656000)		3930 (662000)	
NR TDD Band n77 (DoD)	10 MHz	3455.01(630334)		3500.01(633334)		3544.98(636332)	
	15 MHz	3457.5(630500)		3500.01(633334)		3542.49(636166)	
	20 MHz	3460.02 (630668)		3500.01 (633334)		3540 (636000)	
	25 MHz	3462.99(630866)		3500.01(633334)		3537(635800)	
	30 MHz	3465 (631000)		3500.01 (633334)		3534.99 (635666)	
	40 MHz	3470.01 (631334)				3529.98 (635332)	
	50 MHz	3475.02 (631668)				3525 (635000)	
	60 MHz			3500.01 (633334)			
	70 MHz			3500.01 (633334)			
	80 MHz			3500.01 (633334)			
	90 MHz			3500.01 (633334)			
	100 MHz			3500.01 (633334)			
NR TDD Band n78	10 MHz	3705(647000)		3750(650000)		3795(653000)	
	15 MHz	3707.5(647166)		3750(650000)		3792.48(652832)	
	20 MHz	3710.01(647334)		3750(650000)		3789.99(652666)	
	25 MHz	3712.5(647500)		3750(650000)		3787.5(652500)	
	30 MHz	3715(647666)		3750(650000)		3784.98(652332)	
	40 MHz	3720(647800)				3780(652000)	
	50 MHz	3725.01(648334)				3774.99(651666)	
	60 MHz			3750(650000)			
	70 MHz			3750(650000)			
	80 MHz			3750(650000)			
	90 MHz			3750(650000)			
	100 MHz			3750(650000)			

Ch. No.& Freq.(㎒)		Low / Low-Mid	Mid	Mid-High / High
NR TDD Band n78 (DoD)	10 ㎒	3455.01(630334)	3500.01(633334)	3544.98(636332)
	15 ㎒	3457.5(630500)	3500.01(633334)	3542.49(636166)
	20 ㎒	3460.02(630668)	3500.01(633334)	3540(636000)
	25 ㎒	3462.99(630866)	3500.01(633334)	3537(635800)
	30 ㎒	3465(631000)	3500.01(633334)	3534.99(635666)
	40 ㎒	3470.01(631334)		3529.98(635332)
	50 ㎒	3475.02(631668)		3525(635000)
	60 ㎒		3500.01(633334)	
	70 ㎒		3500.01(633334)	
	80 ㎒		3500.01(633334)	
	90 ㎒		3500.01(633334)	
	100 ㎒		3500.01(633334)	

Item.	Description
NR FDD Band n2/n5/n7/n12/n25/n26/n30/n66/n70//n71 SCS	15 ㎑
NR TDD Band n38/n41/n48/n77/n78 SCS	30 ㎑
3GPP Rel.	Rel.16
A-MPR disabled for SAR Testing.	Yes
5G NR UL/DL FR1	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM DFT-s-OFDM: π/2-BPSK(UL Only), QPSK, 16QAM, 64QAM, 256QAM
Non-Standalone & Standalone are supported. 5G NR FR1 Bands, except n7,n26,n30,n38,n48,n70,n78 are supported to NSA and SA Connectivity. n7,n26,n30,n38,n48,n70,n78 is only supported to SA connectivity More detailed specifications of the 5G NR bands are contained in the Technical description document.	
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations
LTE Anchor Bands for NRBand n2 (PCS)	LTE Band 5/12/13/14/30/48/66
LTE Anchor Bands for NRBand n5 (Cell)	LTE Band 2/4/30/48/66
LTE Anchor Bands for NRBand n7	N/A
LTE Anchor Bands for NRBand n12	LTE Band 2/48/66
LTE Anchor Bands for NRBand n25	LTE Band 12
LTE Anchor Bands for NRBand n26	N/A
LTE Anchor Bands for NRBand n30	N/A
LTE Anchor Bands for NRBand n38	N/A
LTE Anchor Bands for NRBand n41	LTE Band 2/66
LTE Anchor Bands for NRBand n48	N/A
LTE Anchor Bands for NRBand n66 (AWS)	LTE Band 2/5/12/13/14/30/48
LTE Anchor Bands for NRBand n70	N/A
LTE Anchor Bands for NRBand n71	LTE Band 2/48/66
LTE Anchor Bands for NRBand n77	LTE Band 2/5/12/13/14/30/66/71
LTE Anchor Bands for NRBand n78	N/A

4.7 DUT Antenna Locations

The overall dimensions of this device are > 9 X 5 cm. A diagram showing device antenna can be found in SAR_setup_photos. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering. Therefore, SAR test was performed for additional simultaneous transmissions.
Head and Bluetooth Tethering SAR were evaluated for BT BR tethering applications.

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
Antenna A (Main1)	GSM/GPRS/EDGE 850	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	GSM/GPRS/EDGE 850	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	GSM/GPRS/EDGE 1900	Yes	Yes	Yes	Yes	Yes	No
Antenna A (Main1)	UMTS Band 5	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	UMTS Band 5	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	UMTS Band 4	Yes	Yes	Yes	Yes	Yes	No
Antenna A (Main1)	UMTS Band 2	Yes	Yes	Yes	Yes	Yes	No
Antenna A (Main1)	LTE FDD Band 2 (PCS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	LTE FDD Band 2 (PCS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 4 (AWS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	LTE FDD Band 4 (AWS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 5 (Cell)	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 5 (Cell)	Yes	Yes	No	Yes	No	Yes
Antenna B (Main2)	LTE FDD Band 7	Yes	Yes	Yes	No	Yes	No
Antenna F (Sub2)	LTE FDD Band 7	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 12	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 12	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	LTE FDD Band 13	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 13	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	LTE FDD Band 14	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 14	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	LTE FDD Band 25 (PCS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	LTE FDD Band 25 (PCS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 26 (Cell)	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 26 (Cell)	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	LTE FDD Band 30	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	LTE FDD Band 30	Yes	Yes	Yes	No	No	Yes
Antenna B (Main2)	LTE TDD Band 38	Yes	Yes	Yes	No	Yes	No
Antenna F (Sub2)	LTE TDD Band 38	Yes	Yes	Yes	No	No	Yes
Antenna B (Main2)	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	No	Yes	No
Antenna B (Main2)	LTE TDD Band 41 (PC2)	Yes	Yes	Yes	No	Yes	No
Antenna F (Sub2)	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	No	No	Yes
Antenna F (Sub2)	LTE TDD Band 41 (PC2)	Yes	Yes	Yes	No	No	Yes
Antenna F (Sub2)	LTE TDD Band 48	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	LTE FDD Band 71	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	LTE FDD Band 71	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	NR FDD Band n2 (PCS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	NR FDD Band n2 (PCS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	NR FDD Band n5	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	NR FDD Band n5	Yes	Yes	No	Yes	No	Yes

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
Antenna B (Main2)	NR FDD Band n7	Yes	Yes	Yes	No	Yes	No
Antenna F (Sub2)	NR FDD Band n7	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	NR FDD Band n12	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	NR FDD Band n12	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	NR FDD Band n25 (PCS)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	NR FDD Band n25 (PCS)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	NR FDD Band n26	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	NR FDD Band n26	Yes	Yes	No	Yes	No	Yes
Antenna A (Main1)	NR FDD Band n30	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	NR FDD Band n30	Yes	Yes	Yes	No	No	Yes
Antenna B (Main2)	NR TDD Band n38 (PC3 only)	Yes	Yes	Yes	No	Yes	No
Antenna F (Sub2)	NR TDD Band n38 (PC3 only)	Yes	Yes	Yes	No	No	Yes
Antenna F (Sub2)	NR TDD Band n41 (PC2 only)	Yes	Yes	Yes	No	Yes	No
Antenna B (Main2)	NR TDD Band n41 (PC2 only)	Yes	Yes	Yes	No	No	Yes
Antenna E (Sub1)	NR TDD Band n41 (PC2 only)	Yes	Yes	No	Yes	No	Yes
Antenna D (Main4)	NR TDD Band n41 (PC2 only)	Yes	Yes	No	Yes	Yes	No
Antenna F (Sub2)	NR TDD Band n48	Yes	Yes	Yes	No	No	Yes
Antenna C (Main3)	NRTDD Band n48	Yes	Yes	Yes	No	Yes	No
Antenna I (Sub5)	NR TDD Band n48	Yes	Yes	Yes	No	No	No
Antenna D (Main4)	NRTDD Band n48	Yes	Yes	No	Yes	Yes	No
Antenna A (Main1)	NR FDD Band n66 (Lower)	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	NR FDD Band n66 (Upper)	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	NR FDD Band n70	Yes	Yes	Yes	Yes	Yes	No
Antenna F (Sub2)	NR FDD Band n70	Yes	Yes	Yes	No	No	Yes
Antenna A (Main1)	NR FDD Band n71	Yes	Yes	Yes	Yes	Yes	No
Antenna E (Sub1)	NR FDD Band n71	Yes	Yes	No	Yes	No	Yes
Antenna F (Sub2)	NR TDDBand n77 (PC2 only)	Yes	Yes	Yes	No	No	Yes
Antenna C (Main3)	NR TDDBand n77 (PC2 only)	Yes	Yes	Yes	No	Yes	No
Antenna I (Sub5)	NR TDDBand n77 (PC2 only)	Yes	Yes	Yes	No	No	No
Antenna D (Main4)	NR TDDBand n77 (PC2 only)	Yes	Yes	No	Yes	Yes	No
Antenna F (Sub2)	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	No	Yes
Antenna C (Main3)	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	Yes	No
Antenna I (Sub5)	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	No	No
Antenna D (Main4)	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	No	Yes	Yes	No
Antenna F (Sub2)	NR TDD Band n78	Yes	Yes	Yes	No	No	Yes
Antenna C (Main3)	NR TDD Band n78	Yes	Yes	Yes	No	Yes	No
Antenna I (Sub5)	NR TDD Band n78	Yes	Yes	Yes	No	No	No
Antenna D (Main4)	NR TDD Band n78	Yes	Yes	No	Yes	Yes	No
Antenna F (Sub2)	NR TDD Band n78 DoD	Yes	Yes	Yes	No	No	Yes
Antenna C (Main3)	NR TDD Band n78 DoD	Yes	Yes	Yes	No	Yes	No
Antenna I (Sub5)	NR TDD Band n78 DoD	Yes	Yes	Yes	No	No	No
Antenna D (Main4)	NR TDD Band n78 DoD	Yes	Yes	No	Yes	Yes	No
Antenna H(Sub4) WIFI 1	2.4 GHz WLAN	Yes	Yes	Yes	No	No	Yes
Antenna J(Sub6) WIFI2	2.4 GHz WLAN	Yes	Yes	No	Yes	No	Yes
Antenna H(Sub4) BT 1	Bluetooth	Yes	Yes	Yes	No	No	Yes
Antenna J(Sub6) BT 2	Bluetooth	Yes	Yes	No	Yes	No	Yes
Antenna H(Sub4) WIFI 1	5 GHz WLAN	Yes	Yes	Yes	No	No	Yes
Antenna E(Sub1) WIFI2	5 GHz WLAN	Yes	Yes	No	Yes	No	Yes
Antenna H(Sub4) WIFI 1	6 GHz WLAN	Yes	Yes	Yes	No	No	Yes
Antenna E(Sub1) WIFI2	6 GHz WLAN	Yes	Yes	No	Yes	No	Yes
Antenna NFC	NFC	Yes	Yes	Yes	No	Yes	No

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 mm from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.
The distance between the transmit antennas and the edges of the device are included in the filing.
- Note: All test configurations are based on front view position.

4.8 Near Field Communications (NFC) Antenna

This EUT has NFC operations. The NFC antenna is integrated into the device for this model. Therefore, all SAR tests were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the NFC antenna can be found in SAR _ Setup_ photos.

4.9 SAR Summation Scenario

According to FCC KDB 447498 D04v01, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.
This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D04v01.

Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet
GSM voice + 2.4GHz Bluetooth	Yes^	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 5GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2	Yes^	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
UMTS + 2.4GHz WI-FI MIMO	Yes	Yes	Yes	Yes
UMTS + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
UMTS + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
UMTS + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
UMTS + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
UMTS + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
UMTS + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
UMTS + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz WI-FI MIMO	Yes	Yes	Yes	Yes
LTE + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
LTE + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
LTE + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
LTE + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
LTE + 5GNR	Yes	Yes	Yes	Yes
LTE + 2.4GHz Bluetooth + 5GNR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz WI-FI MIMO + 5GNR	Yes	Yes	Yes	Yes
LTE + 5GHz WI-FI MIMO + 5GNR	Yes	Yes	Yes	Yes
LTE + 6GHz WI-FI MIMO + 5GNR	Yes	Yes	N/A	Yes
LTE + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO + 5GNR	Yes	Yes	Yes	Yes
LTE + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO + 5GNR	Yes	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth + 5GHz WI-FI MIMO + 5GNR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO + 5GNR	Yes^	Yes	N/A	Yes

Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GNR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO + 5GNR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO + 5GNR	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz WI-FI MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
5GNR + 2.4GHz Bluetooth	Yes^	Yes	Yes^	Yes
5GNR + 2.4GHz WI-FI MIMO	Yes	Yes	Yes	Yes
5GNR + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
5GNR + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
5GNR + 2.4GHz WI-FI MIMO + 5GHz WI-FI MIMO	Yes	Yes	Yes	Yes
5GNR + 2.4GHz WI-FI MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
5GNR + 2.4GHz Bluetooth + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
5GNR + 2.4GHz Bluetooth+ 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
5GNR + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
5GNR + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI MIMO	Yes^	Yes	Yes^	Yes
5GNR + 2.4GHz Bluetooth+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI MIMO	Yes^	Yes	N/A	Yes
NFC + 5 GHz WI-FI Ant.2	N/A	N/A	N/A	Yes
NFC + 5 GHz WI-FI MIMO	N/A	N/A	N/A	Yes

Note:
1. 2.4 GHz WLAN and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
2. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
3. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi- RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
4. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held-to-ear or bodyworn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI direct beyond that listed in the above table.
5. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
6. 6 GHz Wireless Router is not supported; therefore it was not evaluated for wireless router conditions.
7. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. WLAN can transmit only when operating with MIMO.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering in SISO Mode.
10. This device supports VoLTE.
11. This device supports VoNR.
12. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
13. 5G NR FR2 n258, n260, and n261 cannot transmit simultaneously.
14. LTE + 5G NR FR2 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR2 checklist.
15. NFC was evaluated for phablet based on expected usage conditions.

4.10 SAR Test Considerations

4.10.1 WiFi

Since wireless router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A & U-NII-2C and U-NII-4 WiFi, WiFi Hotspot SAR test and combinations are considered only 2.4 GHz and U-NII-3 for SAR with respected to wireless router configurations according to FCC KDB 941225 D06v02r01.

Since U-NII-1 and U-NII-2A Bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg for 1g SAR and is less than 3.0 W/kg for 10g SAR, SAR is not required for U-NII-1 Band according to FCC KDB 248227D01v02r02.

This device supports IEEE 802.11ax with the following features:

a) Up to 160 MHz Bandwidth only for 5/6 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) 2Tx antenna output
d) Up to 1024 QAM is supported
e)TDWR and Band gap channels are supported for 5/6 GHz
f) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

4.10.2 Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US Bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

LTE SAR for the higher modulations and lower Bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest Bandwidth; and the reported LTE SAR for the highest Bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r05.

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

This Device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is ≤ 0.5dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is ≤1.45 W/Kg, per section 5.2.4 for FCC KDB941225 D05v02r05.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of LTE Band falls completely within an LTE Band with a larger transmission frequency range, both LTE Bands have the same target power or the Band with the larger transmission frequency range has a higher target power and both LTE Bands share the same transmission path and signal characteristics, SAR was only tested for the Band with the larger transmission frequency range.

LTE capabilities with overlapping transmission frequency ranges were applied to LTE Band 5 (824.7 ㎒ ~ 848.3 ㎒) is coverd by LTE Band 26(814.7 ㎒ ~ 848.3 ㎒), LTE Band 4 (1 712.4 ㎒ ~ 1 752.6 ㎒) is coverd by LTE Band 66(1 712.5 ㎒ ~ 1 777.5 ㎒), LTE Band 2(1 850.7 ㎒ ~ 1 909.3 ㎒) is coverd by LTE Band 25(1 850.7 ㎒ ~ 1 914.3 ㎒), LTE Band 38(2 572.5 ㎒ ~ 2 617.5 ㎒) is coverd by LTE Band 41(2 498.5 ㎒ ~ 2 687.5 ㎒) of this model each both LTE bands have the same target powers.
NR capabilities with overlapping transmission frequency ranges were applied to n2(1 852.5 ㎒ ~ 1 907.5 ㎒) is coverd by n25(1 852.5 ㎒ ~ 1 912.5 ㎒), n5(826.5 ㎒ ~ 846.5 ㎒) is coverd by n26(816.5 ㎒ ~ 846.5 ㎒), n38(2 575 ㎒ ~ 2 615 ㎒) is coverd by n41(2 501.01 ㎒ ~ 2 685 ㎒), n78(3 705 ㎒ ~ 3 795 ㎒) is coverd by n77(3 705 ㎒ ~ 3 795 ㎒), n78 DoD(3 455.01 ㎒ ~ 3 544.98 ㎒) is coverd by n77 DoD(3 455.01 ㎒ ~ 3 544.98 ㎒)of this model each both NR bands have the same target powers.

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device support both Power class 2(PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB workshop Notes, SAR test were performed with Power Class 3(given the specific UL/DL Limitations for Power Class 2). Additionally, SAR testing for the power class condition was evaluated for the highest configuration in Power class 3 for each test configuration to confirm he results were scalable linearly.

This product supported Inter-band LTE Carrier Aggregation for 41C, 48C, 66B, 66C with two component carriers in the uplink. SAR Measurement and conducted Powers were measured according to Oct,2018 TCBC Workshop guide.

This device supports NSA(Non-standalone) and SA(Stand alone) connectivity for 5G NR FR1 Bands,More detailed specifications of the Bands are contained in the Technical description document.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.
Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

$$Adjusted\ SAR = Highest\ Reported\ SAR\ x \frac{Secondary\ Max\ tune - up\ (mW)}{Primary\ Max\ tune\ tune - up(mW)} \leq 1.2\ \mathrm{W/kg}.$$

Based on the highest Reported SAR, the secondary mode is not required.

5. Introduction

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 ㎓. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (d*W*) absorbed by (dissipated in) an incremental mass (d*m*) contained in a volume element (d*V*) of a given density (*r*). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

$$SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right)$$

Figure 1. SAR Mathematical Equation
SAR is expressed in units of Watts per Kilogram (W/kg)

Where:
= conductivity of the tissue-simulant material (S/m)
= mass density of the tissue-simulant material (kg/㎥)
= Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

6. Description of test equipment

6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid& Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 is working with SAR Measurement system DASY4 & DASY5, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

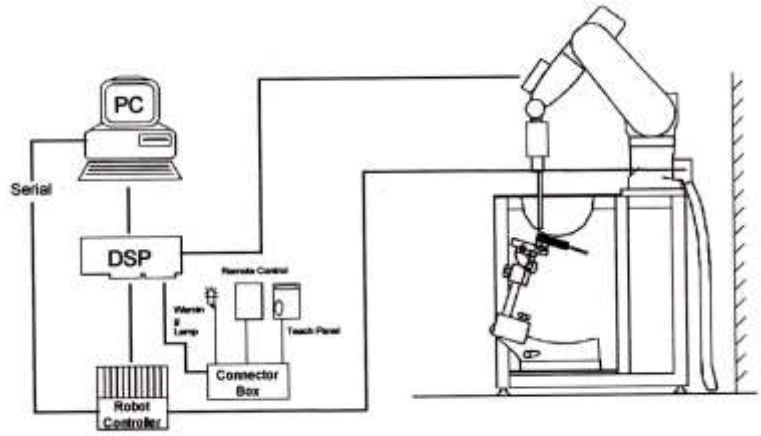


Figure 2. HCT SAR Lab. Test Measurement Set-up

The DAE consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

7. SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013.

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.

2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.

3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)

   a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

   b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Area scan and zoom scan resolution setting follow KDB 865664 D01v01r04 quoted below.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan Spatial resolution: $\Delta x_{Area}, \Delta y_{Area}$</td><td>≤ 2 GHz: ≤15 mm
2-3 GHz: ≤12 mm</td><td>3-4 GHz: ≤12 mm
4-6 GHz: ≤10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan Spatial resolution: $\Delta x_{zoom}, \Delta y_{zoom}$</td><td>≤ 2 GHz: ≤8mm
2-3 GHz: ≤5mm*</td><td>3-4 GHz: ≤5 mm*
4-6 GHz: ≤4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan Spatial resolution normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{zoom}(n)$</td><td>≤ 5 mm</td><td>3-4 GHz: ≤4 mm
4-5 GHz: ≤3 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{zoom}(1)$: between 1st two Points closest to phantom surface</td><td>≤ 4 mm</td><td>3-4 GHz: ≤3 mm
4-5 GHz: ≤2.5 mm
5-6 GHz: ≤2 mm</td></tr>
<tr><td>$\Delta z_{zoom}(n>1)$:between subsequent Points</td><td colspan="2">$\leq 1.5 \cdot \Delta z_{zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3-4 GHz: ≥28 mm
4-5 GHz: ≥25 mm
5-6 GHz: ≥22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

8. Description of Test Position

8.1 EAR REFERENCE POINT

Figure 8-2 shows the front, back and side views of the SAM phantom. The center-of-mouth reference point is labeled “M”, the left ear reference point (ERP) is marked “LE”, and the right ERP is marked “RE.” Each ERP is on the B-M (back-mouth) line located 15 mm behind the entrance-to-ear-canal (EEC) point, as shown in Figure 6-1. The Reference Plane is defined as passing through the two ear reference point and point M. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (See Figure 5-1), Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

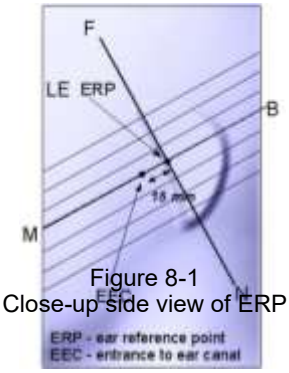


Figure 8-1
Close-up side view of ERP

8.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The device under test was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point”(see Figure 8-3). The acoustic output was than located at the same level as the center of the ear reference point. The device under test was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.

Figure 8-2
Front, back and side views of SAM Twin Phantom

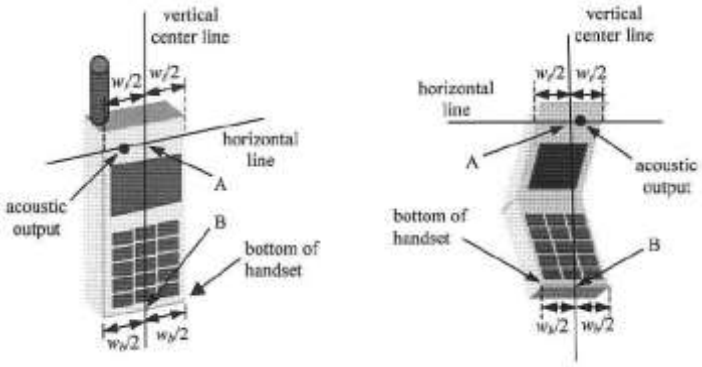


Figure 6-3. Handset vertical and horizontal reference lines

8.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameter; relative permittivity ε=3 and loss tangent σ =0.02.

8.4 Position for cheek

Figure 6.4. shows cheek or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

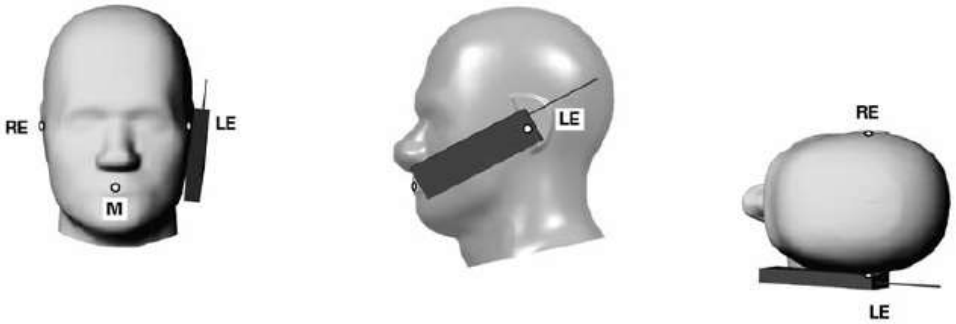


Figure 8.4 Cheek/ Touch position of the wireless device

8.5 Definition of the “tilted” position

Figure 6.5. shows tilted position. Place the device in the cheek position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.

Figure 8.5. Tilt 15°position of the wireless device

8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 6-6). Per FCC KDB Publication 648474 D04v01r03 Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in Body-worn accessories. The Body-worn accessory procedures in FCC KDB Publication 447498 D04v01 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it.. When the reported SAR for a body- worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency Band should be repeated for that body-worn accessory with a headset attached to the handset.

Figure 8-6
Sample Body-Worn Diagram

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-dip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W≥9cmx5 cm) are based on *a* composite test separation distance of 10 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D04v01 publication procedures. The Portable Hotspot feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D04v01 should be applied to determine SAR test requirements.

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear. the phablets procedures outlined in KDB Publication 648474 D04 v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worm accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna ≤25 mm from that surface or edge, in direct contact with the phantom, for 10-g SAR. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1-g SAR > 1.2 W/kg.

8.9 Bluetooth tethering Configurations

Per May 2017 TCBC Workshop Document, When Bluetooth tethering applies, simultaneous transmission SAR needs consideration.

This model allows users to exchange data or media files with other Bluetooth enabled devices using Bluetooth, which means they can connect to other Bluetooth enabled devices via Bluetooth tethering.
Therefore, SAR test was performed for additional simultaneous transmissions.
Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

9. RF Exposure Limits

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Partial Body)	1.6	8.0
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.4
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.0	20.0

NOTES:

* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

** The Spatial Average value of the SAR averaged over the whole-body.

*** The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be mad fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e.as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

10. FCC SAR General Measurement Procedures

Power Measurements for licensed transmitters are performed using a base simulator under digital average power.

10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D04v01, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

10.2 3G SAR Test Reduction Procedure

10.2.1 GSM, GPRS AND EDGE

The following procedures may be considered for each frequency Band to determine SAR test reduction for devices operating in GSM/GPRS/EDGE modes to demonstrate RF exposure compliance. GSM voice mode transmits with 1 time-slot. GPRS and EDGE may transmit up to 4 time slots in the 8 time-slot frame according to the multi-slot class implemented in a device.

10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency Band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.
SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures.
The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to Cheek for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

10.3 SAR Measurement Conditions for UMTS

10.3.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

10.3.2 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2kbps RMC.

10.3.3 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

10.3.4 SAR Measurements with Rel. 6 HSUPA

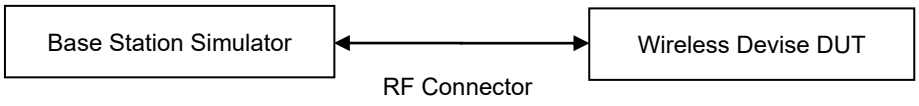
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

10.3.5DC-HSDPA

SAR is required for Rel.8 DC-HSDPA when SAR is required for Rel.5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in table C.8.1.12 of 3GPP TS34.121-1 to determine SAR test reduction. Primary and secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

DC-HSDPA Configurations

- 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



10.4 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are 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. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

10.4.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

10.4.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

10.4.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

a. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest Bandwidth
   i. The required channel and offset combination with the highest maximum output power is required for SAR.
   ii. When the reported SAR is ≤ 0.8 W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
   iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
b. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest Bandwidth following the same procedures outlined in Sec 4.2.1.
c. Per Sec. 4.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
d. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower Bandwidths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

10.4.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel Bandwidth, modulation and RB combinations in each frequency Band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the

average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

10.4.6 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, 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.
SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special subframe configuration 6. LTE TDD Band 41 supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Calculated Duty Cycle – Extended cyclic prefix in uplink x (T_s) x no of S + no of U

Table 4.2-2: Uplink-downlink configurations.

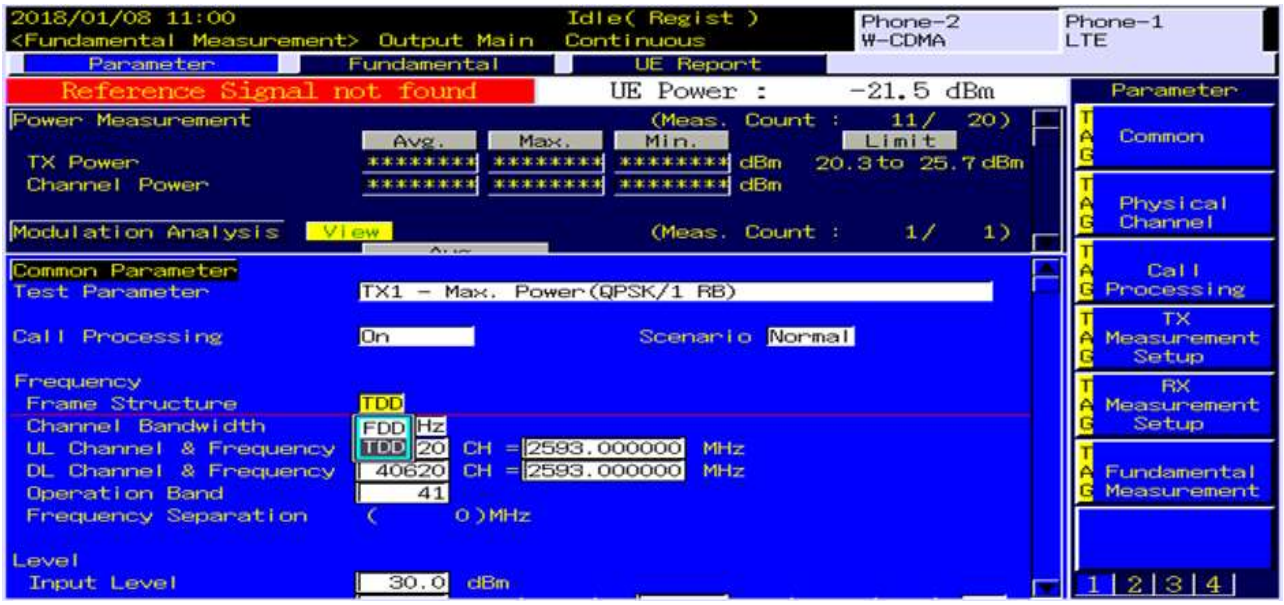
Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

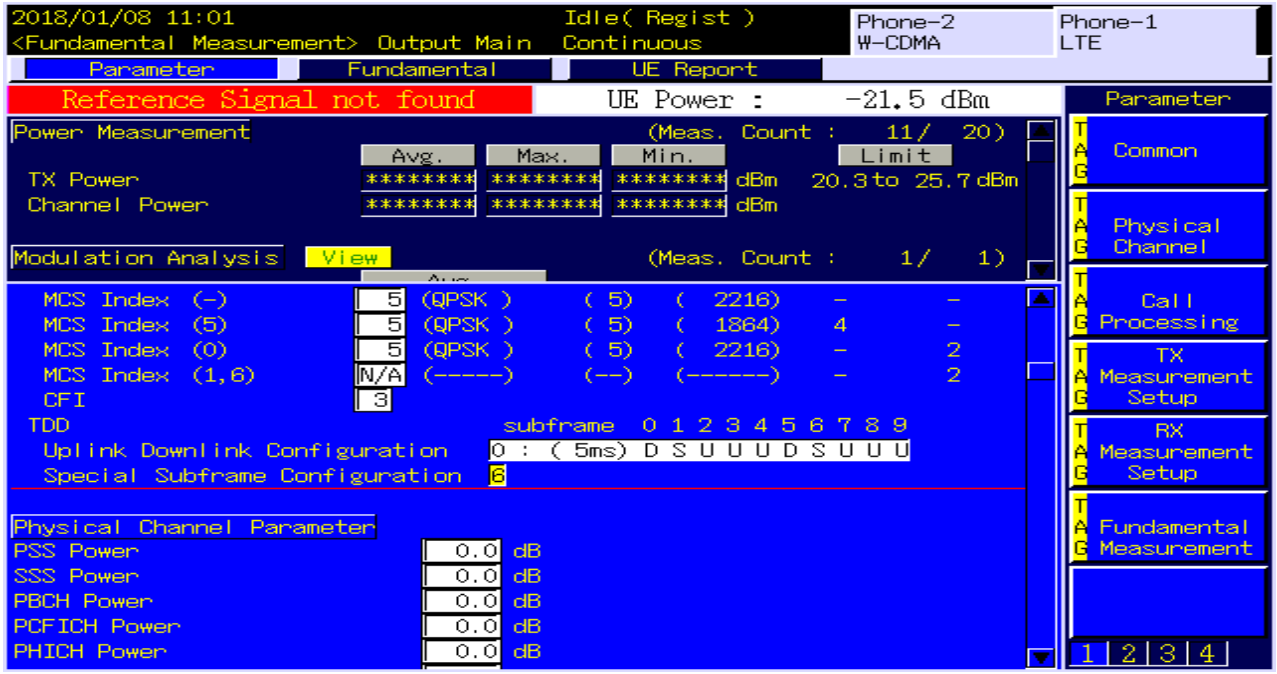
Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = (5120 x (1/(15000 x 2048)) x 2 + 0.006)/0.01 = 63.33 %
Where
T_s = 1/(15000 x 2048) seconds

HPUE :
Calculated Duty Cycle for Uplink-Downlink Configuration 1:
Calculated Duty Cycle =5120*(1/(15000*2048))*2+0.004)/0.01 = 43.33 %

10.4.7 The Call Box Setup for LTE(TDD)

When you Want to Test for LTE TDD, Please Change Frame Structure TDD and TDD Uplink Downlink Configuration 0 and Special Subframe Configuration 6.





10.5 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

10.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.
A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

10.5.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII2A Bands, when the same maximum output power is specified for both Bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg for 1g SAR or > 3.0 W/kg for 10g SAR. When different maximum output powers are specified for the Bands, SAR measurement for the U-NII Band with the lower maximum output power is not required unless the highest reported SAR for the U-NII Band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two Bands, is > 1.2 W/kg for 1g SAR or > 3.0 W/kg for 10g SAR.

10.5.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 ㎒ (5.47 ㎓ – 5.85 ㎓), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 ㎓ – 5.65 ㎓ in U-NII-2C Band must be disabled with acceptable mechanisms and documented in the equipment certification.
Unless Band gap channels are permanently disabled, SAR must be considered for these channels.

10.5.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating nest to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test position is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test positions are measured.

10.5.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:
1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz Band, the Initial Test Configuration Procedures should be followed.

10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 GHz and 5 GHz Bands, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency Band or aggregated Band, SAR is measured using the configuration with the largest channel Bandwidth, lowest order modulation and lowest data rate and lowest order 802.11 a/g/n/ac mode. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11 ac or 802.11g and 802.11n with the same channel Bandwidth, modulation and data rate etc., the lower order 802.11 mode i.2., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency Band or aggregated Band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

10.5.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 GHz and 5 GHz Bands, an initial test configuration is determined for each frequency Band and aggregated Band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency Band or aggregated Band, SAR is measured using the configuration(s) with the largest channel Bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 dB of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

10.5.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency Band and aggregated Band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position on procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg for 1g SAR and ≤ 3.0 W/kg for 10g SAR, no additional SAR tests for the subsequent test configurations are required.

11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D04v01.

Licensed Bands

Test Description	Test Procedure Used
Conducted Output Power	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2

Test Overview

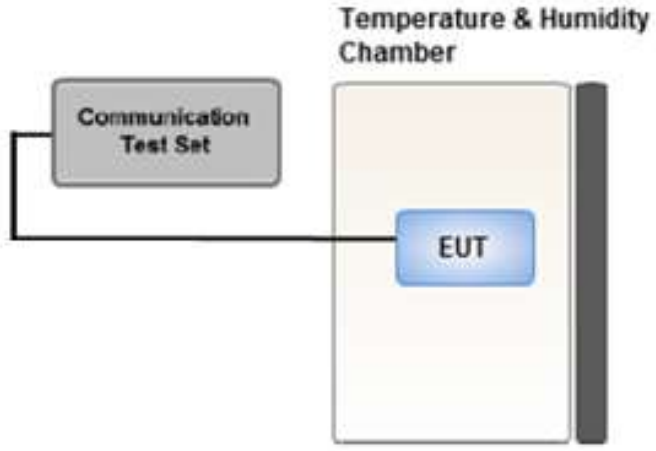
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

Test setup



11.1 GSM

11.1.1 GSM Maximum Conducted Output Power

GSM850

Measured *Pmax*, DSI = 0 Calculations – Antenna E

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**34.50**	**34.50**	**32.50**	**30.50**	**28.50**	**28.00**	**26.00**	**25.50**	**25.50**
Nominal		**33.50**	**33.50**	**31.50**	**29.50**	**27.50**	**27.00**	**25.00**	**24.50**	**24.50**
GSM 850	128	33.94	33.93	31.97	29.98	28.47	27.61	25.93	25.14	24.70
	190	33.51	33.50	31.64	29.85	28.11	27.19	25.97	25.17	24.85
	251	33.70	33.71	31.62	29.87	28.12	27.17	25.40	24.56	24.18

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**25.47**	**25.47**	**26.48**	**26.24**	**25.49**	**18.97**	**19.98**	**21.24**	**22.49**
Nominal		**24.47**	**24.47**	**25.48**	**25.24**	**24.49**	**17.97**	**18.98**	**20.24**	**21.49**
GSM 850	128	24.91	24.9	25.95	25.72	25.46	18.58	19.91	20.88	21.69
	190	24.48	24.47	25.62	25.59	25.10	18.16	19.95	20.91	21.84
	251	24.67	24.68	25.60	25.61	25.11	18.14	19.38	20.30	21.17

GSM Conducted output powers (Frame-Average)

Measured DSI = 1 Calculations – Antenna E

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**31.20**	**31.20**	**28.20**	**26.40**	**25.20**	**28.00**	**26.00**	**25.50**	**25.20**
Nominal		**30.20**	**30.20**	**27.20**	**25.40**	**24.20**	**27.00**	**25.00**	**24.50**	**24.20**
GSM 850	128	30.23	30.24	27.50	25.51	24.64	27.63	25.60	24.74	24.12
	190	29.97	29.99	27.24	25.10	24.21	26.95	25.52	24.70	24.00
	251	30.08	30.10	27.27	25.38	24.29	27.02	25.33	24.57	23.54

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**22.17**	**22.17**	**22.18**	**22.14**	**22.19**	**18.97**	**19.98**	**21.24**	**22.19**
Nominal		**21.17**	**21.17**	**21.18**	**21.14**	**21.19**	**17.97**	**18.98**	**20.24**	**21.19**
GSM 850	128	21.20	21.21	21.48	21.25	21.63	18.60	19.58	20.48	21.11
	190	20.94	20.96	21.22	20.84	21.20	17.92	19.50	20.44	20.99
	251	21.05	21.07	21.25	21.12	21.28	17.99	19.31	20.31	20.53

GSM Conducted output powers (Frame-Average)

Measured *Pmax*, DSI = 0, 1 Calculations – Antenna A

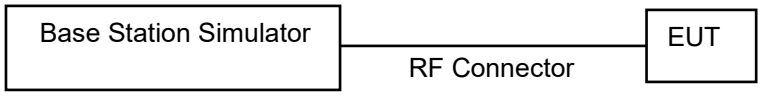
Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**34.50**	**34.50**	**32.50**	**30.50**	**28.50**	**28.00**	**26.00**	**25.50**	**25.00**
Nominal		**33.50**	**33.50**	**31.50**	**29.50**	**27.50**	**27.00**	**25.00**	**24.50**	**24.00**
GSM 850	128	33.72	33.72	31.88	29.75	27.94	26.47	25.18	24.28	24.02
	190	33.31	33.32	32.09	29.23	27.25	26.31	25.38	24.51	24.33
	251	33.25	33.26	31.92	29.21	27.68	26.49	24.91	24.12	23.78

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**25.47**	**25.47**	**26.48**	**26.24**	**25.49**	**18.97**	**19.98**	**21.24**	**21.99**
Nominal		**24.47**	**24.47**	**25.48**	**25.24**	**24.49**	**17.97**	**18.98**	**20.24**	**20.99**
GSM 850	128	24.69	24.69	25.86	25.49	24.93	17.44	19.16	20.02	21.01
	190	24.28	24.29	26.07	24.97	24.24	17.28	19.36	20.25	21.32
	251	24.22	24.23	25.90	24.95	24.67	17.46	18.89	19.86	20.77

GSM Conducted output powers (Frame-Average)

Note:
Time slot average factor is as follows:
1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



GSM1900

Measured P_{max}, DSI = 1 Calculations – Antenna A

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**31.00**	**31.00**	**28.50**	**26.50**	**25.00**	**26.00**	**25.00**	**24.50**	**24.00**
Nominal		**30.00**	**30.00**	**27.50**	**25.50**	**24.00**	**25.00**	**24.00**	**23.50**	**23.00**
GSM 1900	512	29.49	29.61	27.05	24.86	23.23	24.99	23.93	23.25	23.11
	661	29.89	29.88	27.44	25.40	23.69	25.18	24.01	23.30	23.09
	810	30.01	30.03	27.23	24.87	23.91	25.22	24.03	23.31	23.08

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**21.97**	**21.97**	**22.48**	**22.24**	**21.99**	**16.97**	**18.98**	**20.24**	**20.99**
Nominal		**20.97**	**20.97**	**21.48**	**21.24**	**20.99**	**15.97**	**17.98**	**19.24**	**19.99**
GSM 1900	512	20.46	20.58	21.03	20.60	20.22	15.96	17.91	18.99	20.10
	661	20.86	20.85	21.42	21.14	20.68	16.15	17.99	19.04	20.08
	810	20.98	21.00	21.21	20.61	20.90	16.19	18.01	19.05	20.07

GSM Conducted output powers (Frame-Average)

Measured, DSI = 0 Calculations – Antenna A

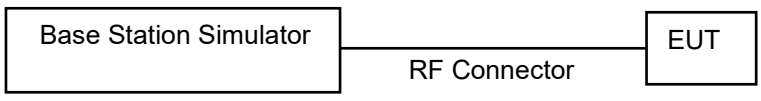
Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**29.00**	**29.00**	**26.00**	**24.20**	**23.00**	**26.00**	**25.00**	**24.20**	**23.00**
Nominal		**28.00**	**28.00**	**25.00**	**23.20**	**22.00**	**25.00**	**24.00**	**23.20**	**22.00**
GSM 1900	512	27.17	27.18	24.38	22.73	21.46	24.99	23.98	22.95	21.61
	661	27.70	27.71	24.68	23.82	22.01	25.14	23.96	23.11	21.75
	810	27.37	27.36	25.04	22.51	21.53	25.20	23.99	22.81	21.51

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		**19.97**	**19.97**	**19.98**	**19.94**	**19.99**	**16.97**	**18.98**	**19.94**	**19.99**
Nominal		**18.97**	**18.97**	**18.98**	**18.94**	**18.99**	**15.97**	**17.98**	**18.94**	**18.99**
GSM 1900	512	18.14	18.15	18.36	18.47	18.45	15.96	17.96	18.69	18.60
	661	18.67	18.68	18.66	19.56	19.00	16.11	17.94	18.85	18.74
	810	18.34	18.33	19.02	18.25	18.52	16.17	17.97	18.55	18.50

GSM Conducted output powers (Frame-Average)

Note:
Time slot average factor is as follows:
1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB
2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB
3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB
4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB



11.2 UMTS

HSPA+
This DUT is only capable of QPSK HSPA+ in uplink. Therefore, the RF conducted power is not measured according to 941225 D01v03r01 3G SAR.

11.2.1 UMTS Maximum Conducted Output Power

UMTS Band 5

UMTS Band 5 Maximum Conducted Output Power (P_{max}, DSI = 0) Antenna E

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 5 [dBm] UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	3GPP MPR
99	UMTS	12.2 kbps RMC	24.98	24.92	24.83	-
99		12.2 kbps AMR	24.97	24.90	24.82	-
5	HSDPA	Subtest 1	23.96	23.90	23.83	0
5		Subtest 2	23.92	23.93	23.85	0
5		Subtest 3	23.45	23.37	23.33	0.5
5		Subtest 4	23.42	23.39	23.34	0.5
6	HSUPA	Subtest 1	23.91	23.91	23.86	0
6		Subtest 2	21.97	21.94	21.72	2
6		Subtest 3	22.92	22.91	22.84	1
6		Subtest 4	21.96	21.93	21.73	2
6		Subtest 5	23.91	23.92	23.85	0
8	DC-HSDPA	Subtest1	23.34	23.33	23.37	0
8		Subtest2	23.31	23.31	23.36	0
8		Subtest3	22.83	22.85	22.87	0.5
8		Subtest4	22.82	22.85	22.87	0.5

UMTS Average Conducted output powers

UMTS Band 5 Maximum Conducted Output Power (DSI = 1) Antenna E

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 5 [dBm] UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	3GPP MPR
99	UMTS	12.2 kbps RMC	21.66	21.61	21.54	-
99		12.2 kbps AMR	21.64	21.60	21.53	-
5	HSDPA	Subtest 1	20.66	20.61	20.54	0
5		Subtest 2	20.64	20.63	20.52	0
5		Subtest 3	20.16	20.12	20.03	0.5
5		Subtest 4	20.19	20.10	20.03	0.5
6	HSUPA	Subtest 1	20.58	20.58	20.54	0
6		Subtest 2	18.53	18.59	18.58	2
6		Subtest 3	19.64	19.62	19.63	1
6		Subtest 4	18.52	18.58	18.55	2
6		Subtest 5	20.58	20.57	20.53	0
8	DC-HSDPA	Subtest1	20.12	19.92	19.99	0
8		Subtest2	20.11	19.92	19.98	0
8		Subtest3	19.62	19.42	19.54	0.5
8		Subtest4	19.63	19.43	19.52	0.5

UMTS Average Conducted output powers

UMTS Band 5 Maximum Conducted Output Power (P_{max}, DSI = 0, 1) Antenna A

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	24.33	24.31	24.21	-
99		12.2 kbps AMR	24.32	24.30	24.20	-
5	HSDPA	Subtest 1	23.36	23.30	23.23	0
5		Subtest 2	23.35	23.30	23.21	0
5		Subtest 3	22.84	22.81	22.72	0.5
5		Subtest 4	22.65	22.77	22.72	0.5
6	HSUPA	Subtest 1	23.31	23.30	23.17	0
6		Subtest 2	21.34	21.34	21.22	2
6		Subtest 3	22.23	22.30	22.23	1
6		Subtest 4	21.31	21.27	21.24	2
6		Subtest 5	23.31	23.22	23.13	0
8	DC-HSDPA	Subtest1	22.79	22.82	22.72	0
8		Subtest2	22.78	22.81	22.73	0
8		Subtest3	22.29	22.33	22.52	0.5
8		Subtest4	22.28	22.33	22.52	0.5

UMTS Average Conducted output powers

UMTS Band 4

UMTS Band 4 Maximum Conducted Output Power (P_{max}, DSI = 1) Antenna A

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 4 [dBm] UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	3GPP MPR
99	UMTS	12.2 kbps RMC	22.58	22.79	22.98	-
99		12.2 kbps AMR	22.58	22.76	22.95	-
5	HSDPA	Subtest 1	21.65	21.75	21.98	0
5		Subtest 2	21.65	21.74	21.98	0
5		Subtest 3	21.15	21.24	21.38	0.5
5		Subtest 4	21.15	21.25	21.37	0.5
6	HSUPA	Subtest 1	21.58	21.77	21.89	0
6		Subtest 2	19.61	19.79	20.02	2
6		Subtest 3	20.71	20.80	20.94	1
6		Subtest 4	19.65	19.82	19.95	2
6		Subtest 5	21.57	21.76	21.88	0
8	DC-HSDPA	Subtest1	20.97	20.98	20.98	0
8		Subtest2	20.90	20.97	20.98	0
8		Subtest3	20.46	20.44	20.53	0.5
8		Subtest4	20.68	20.45	20.53	0.5

UMTS Average Conducted output powers

UMTS Band 4 Maximum Conducted Output Power (DSI = 0) Antenna A

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 4 [dBm] UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	3GPP MPR
99	UMTS	12.2 kbps RMC	19.15	19.38	19.47	-
99		12.2 kbps AMR	19.13	19.37	19.46	-
5	HSDPA	Subtest 1	18.21	18.41	18.44	0
5		Subtest 2	18.10	18.37	18.41	0
5		Subtest 3	17.60	17.89	17.97	0.5
5		Subtest 4	17.69	17.90	17.95	0.5
6	HSUPA	Subtest 1	17.91	18.11	18.28	0
6		Subtest 2	15.93	16.11	16.27	2
6		Subtest 3	16.96	17.11	17.28	1
6		Subtest 4	15.94	16.12	16.28	2
6		Subtest 5	17.90	18.11	18.27	0
8	DC-HSDPA	Subtest1	17.55	17.61	17.72	0
8		Subtest2	17.54	17.60	17.73	0
8		Subtest3	17.05	17.11	17.22	0.5
8		Subtest4	17.04	17.10	17.20	0.5

UMTS Average Conducted output powers

UMTS Band 2

UMTS Band 2 Maximum Conducted Output Power (P_{max}, DSI = 1) Antenna A

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 2 [dBm] UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	3GPP MPR
99	UMTS	12.2 kbps RMC	23.66	23.78	23.77	-
99		12.2 kbps AMR	23.57	23.78	23.76	-
5	HSDPA	Subtest 1	22.63	22.72	22.78	0
5		Subtest 2	22.63	22.70	22.77	0
5		Subtest 3	22.12	22.23	22.28	0.5
5		Subtest 4	22.11	22.18	22.28	0.5
6	HSUPA	Subtest 1	22.62	22.72	22.75	0
6		Subtest 2	20.61	20.78	20.70	2
6		Subtest 3	21.61	21.71	21.76	1
6		Subtest 4	20.62	20.74	20.72	2
6		Subtest 5	22.62	22.71	22.76	0
8	DC-HSDPA	Subtest 1	22.10	22.18	22.15	0
8		Subtest2	22.11	22.17	22.14	0
8		Subtest3	21.66	21.68	21.64	0.5
8		Subtest4	21.67	21.68	21.64	0.5

UMTS Average Conducted output powers

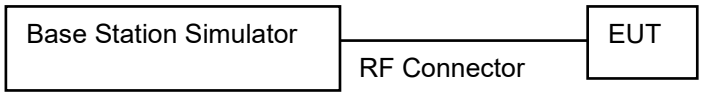
UMTS Band 2 Maximum Conducted Output Power (DSI = 0) Antenna A

3GPP Release Version	Mode	3GPP 34.121 Subtest	UMTS Band 2 [dBm] UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	3GPP MPR
99	UMTS	12.2 kbps RMC	18.55	18.70	18.77	-
99		12.2 kbps AMR	18.56	18.69	18.75	-
5	HSDPA	Subtest 1	17.50	17.73	17.75	0
5		Subtest 2	17.52	17.67	17.73	0
5		Subtest 3	16.96	17.21	17.24	0.5
5		Subtest 4	16.95	17.22	17.19	0.5
6	HSUPA	Subtest 1	17.30	17.48	17.53	0
6		Subtest 2	15.30	15.50	15.55	2
6		Subtest 3	16.29	16.47	16.53	1
6		Subtest 4	15.31	15.49	15.55	2
6		Subtest 5	17.31	17.49	17.52	0
8	DC-HSDPA	Subtest 1	17.00	17.01	17.13	0
8		Subtest2	17.20	17.16	17.23	0
8		Subtest3	16.56	16.47	16.75	0.5
8		Subtest4	16.62	16.65	16.68	0.5

UMTS Average Conducted output powers

DC-HSDPA Configurations

- 3GPP specification TS 34.121-1 Release 8. was used for used for DC-HSDPA guidance.
- H-set 12(QPSK)was conformed to be used during DC-HSDPA measurements.



11.3 LTE Maximum Output Power

Only the Conducted Power measurement results of the maximum bandwidth, which is the SAR test condition of LTE Bands according to FCC KDB 941225 D05, are included, and the measurement results of other bandwidths are listed in Appendix K.

LTE B4/B5/B12/B13/B17/B26/B41 at Max Bandwidth does not support three non-overlapping channels. Per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel Bandwidth configuration, the mid channel of the group of overlapping channels should be selected for testing.

11.3.1 LTE Maximum Conducted Power

[LTE FDD Band 2 Conducted Power_ Antenna A _ *Pmax*, DSI = 1]

LTE FDD Band 2 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	23.62	23.66	24.15	0	0
		1	49	23.53	23.73	23.76	0	0
		1	99	23.52	23.77	23.67	0	0
		50	0	22.56	22.75	22.82	0-1	1
		50	25	22.66	22.79	22.78	0-1	1
		50	49	22.67	22.84	22.82	0-1	1
		100	0	22.57	22.74	22.73	0-1	1
	16QAM	1	0	23.39	23.18	23.22	0-1	1
		1	49	22.77	22.92	22.90	0-1	1
		1	99	23.37	23.24	22.81	0-1	1
		50	0	21.51	21.67	21.78	0-2	2
		50	25	21.62	21.77	21.80	0-2	2
		50	49	21.65	21.83	21.74	0-2	2
		100	0	21.58	21.73	21.64	0-2	2
	64QAM	1	0	21.71	21.90	21.84	0-2	2
		1	49	21.81	22.07	22.01	0-2	2
		1	99	21.80	22.00	21.95	0-2	2
		50	0	20.53	20.82	20.47	0-3	3
		50	25	20.66	20.67	20.68	0-3	3
		50	49	20.67	20.79	20.77	0-3	3
		100	0	20.62	20.72	20.73	0-3	3
	256QAM	1	0	18.61	18.63	18.68	0-5	5
		1	49	18.62	18.87	19.04	0-5	5
		1	99	18.68	19.01	18.91	0-5	5
		50	0	18.56	18.74	18.77	0-5	5
		50	25	18.54	18.81	18.39	0-5	5
		50	49	18.57	18.71	18.55	0-5	5
		100	0	18.63	18.78	18.72	0-5	5

[LTE FDD Band 4 Conducted Power _ Antenna A_ *Pmax,* DSI = 1]

LTE FDD Band 4 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	23.41	0	0
		1	49	23.42	0	0
		1	99	23.44	0	0
		50	0	22.40	0-1	1
		50	25	22.53	0-1	1
		50	49	22.58	0-1	1
		100	0	22.52	0-1	1
	16QAM	1	0	22.39	0-1	1
		1	49	22.61	0-1	1
		1	99	22.78	0-1	1
		50	0	21.41	0-2	2
		50	25	21.55	0-2	2
		50	49	21.51	0-2	2
		100	0	21.57	0-2	2
	64QAM	1	0	21.37	0-2	2
		1	49	21.57	0-2	2
		1	99	21.86	0-2	2
		50	0	20.45	0-3	3
		50	25	20.59	0-3	3
		50	49	20.54	0-3	3
		100	0	20.52	0-3	3
	256QAM	1	0	18.46	0-5	5
		1	49	18.57	0-5	5
		1	99	18.62	0-5	5
		50	0	18.48	0-5	5
		50	25	18.62	0-5	5
		50	49	18.60	0-5	5
		100	0	18.54	0-5	5

[LTE FDD Band 5 Conducted Power _ Antenna A_*Pmax*, DSI =0, 1]

LTE FDD Band 5 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20525 Ch. 836.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.16	0	0
		1	24	24.06	0	0
		1	49	24.01	0	0
		25	0	23.05	0-1	1
		25	12	22.97	0-1	1
		25	24	23.03	0-1	1
		50	0	22.99	0-1	1
	16QAM	1	0	23.09	0-1	1
		1	24	23.22	0-1	1
		1	49	23.18	0-1	1
		25	0	22.12	0-2	2
		25	12	22.08	0-2	2
		25	24	22.08	0-2	2
		50	0	21.98	0-2	2
	64QAM	1	0	22.12	0-2	2
		1	24	22.12	0-2	2
		1	49	22.10	0-2	2
		25	0	21.08	0-3	3
		25	12	21.11	0-3	3
		25	24	21.10	0-3	3
		50	0	21.08	0-3	3
	256QAM	1	0	19.10	0-5	5
		1	24	18.77	0-5	5
		1	49	19.00	0-5	5
		25	0	19.03	0-5	5
		25	12	19.05	0-5	5
		25	24	19.01	0-5	5
		50	0	18.96	0-5	5

[LTE FDD Band 5 Conducted Power _ Antenna E_*Pmax*, DSI = 0]

LTE FDD Band 5 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20525 Ch. 836.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.22	0	0
		1	24	24.25	0	0
		1	49	24.34	0	0
		25	0	23.36	0-1	1
		25	12	23.43	0-1	1
		25	24	23.32	0-1	1
		50	0	23.37	0-1	1
	16QAM	1	0	23.93	0-1	1
		1	24	23.45	0-1	1
		1	49	23.33	0-1	1
		25	0	22.36	0-2	2
		25	12	22.47	0-2	2
		25	24	22.44	0-2	2
		50	0	22.34	0-2	2
	64QAM	1	0	22.47	0-2	2
		1	24	22.50	0-2	2
		1	49	22.49	0-2	2
		25	0	21.45	0-3	3
		25	12	21.39	0-3	3
		25	24	21.39	0-3	3
		50	0	21.36	0-3	3
	256QAM	1	0	19.38	0-5	5
		1	24	19.41	0-5	5
		1	49	19.38	0-5	5
		25	0	19.33	0-5	5
		25	12	19.41	0-5	5
		25	24	19.36	0-5	5
		50	0	19.39	0-5	5

[LTE FDD Band 7 Conducted Power _ Antenna B_*Pmax*, DSI = 1]

LTE FDD Band 7 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	22.62	23.15	23.76	0	0
		1	49	23.07	23.15	23.27	0	0
		1	99	22.90	23.17	23.25	0	0
		50	0	22.32	22.31	22.32	0-1	1
		50	25	22.26	22.29	22.31	0-1	1
		50	49	22.24	22.23	22.38	0-1	1
		100	0	22.21	22.24	22.28	0-1	1
	16QAM	1	0	22.35	22.32	22.52	0-1	1
		1	49	22.42	22.41	22.39	0-1	1
		1	99	22.25	22.21	22.37	0-1	1
		50	0	21.40	21.29	21.35	0-2	2
		50	25	21.29	21.33	21.31	0-2	2
		50	49	21.29	21.27	21.39	0-2	2
		100	0	21.25	21.26	21.30	0-2	2
	64QAM	1	0	21.34	21.39	21.26	0-2	2
		1	49	21.44	21.57	21.52	0-2	2
		1	99	21.19	21.45	21.51	0-2	2
		50	0	20.34	20.29	20.33	0-3	3
		50	25	20.28	20.31	20.28	0-3	3
		50	49	20.32	20.29	20.38	0-3	3
		100	0	20.31	20.30	20.36	0-3	3
	256QAM	1	0	18.54	18.32	18.47	0-5	5
		1	49	18.41	18.39	18.57	0-5	5
		1	99	18.02	18.29	18.54	0-5	5
		50	0	18.29	18.26	18.20	0-5	5
		50	25	18.26	18.31	18.38	0-5	5
		50	49	18.18	18.32	18.39	0-5	5
		100	0	18.24	18.26	18.27	0-5	5

[LTE FDD Band 12 Conducted Power_Antenna A_ *Pmax*, DSI = 0, 1]

LTE FDD Band 12 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23095 Ch. 707.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.77	0	0
		1	24	24.37	0	0
		1	49	24.22	0	0
		25	0	22.99	0-1	1
		25	12	22.89	0-1	1
		25	24	22.97	0-1	1
		50	0	22.90	0-1	1
	16QAM	1	0	23.55	0-1	1
		1	24	23.15	0-1	1
		1	49	23.16	0-1	1
		25	0	22.03	0-2	2
		25	12	21.95	0-2	2
		25	24	22.02	0-2	2
		50	0	22.00	0-2	2
	64QAM	1	0	21.93	0-2	2
		1	24	22.30	0-2	2
		1	49	22.13	0-2	2
		25	0	20.99	0-3	3
		25	12	20.96	0-3	3
		25	24	20.97	0-3	3
		50	0	20.92	0-3	3
	256QAM	1	0	18.98	0-5	5
		1	24	19.12	0-5	5
		1	49	18.98	0-5	5
		25	0	18.96	0-5	5
		25	12	18.98	0-5	5
		25	24	18.99	0-5	5
		50	0	18.92	0-5	5

[LTE FDD Band 12 Conducted Power_Antenna E_ *Pmax*, DSI = 0]

LTE FDD Band 12 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23095 Ch. 707.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.33	0	0
		1	24	24.45	0	0
		1	49	24.52	0	0
		25	0	23.63	0-1	1
		25	12	23.67	0-1	1
		25	24	23.62	0-1	1
		50	0	23.60	0-1	1
	16QAM	1	0	23.84	0-1	1
		1	24	23.63	0-1	1
		1	49	23.72	0-1	1
		25	0	22.65	0-2	2
		25	12	22.64	0-2	2
		25	24	22.70	0-2	2
		50	0	22.75	0-2	2
	64QAM	1	0	22.79	0-2	2
		1	24	22.63	0-2	2
		1	49	22.63	0-2	2
		25	0	21.59	0-3	3
		25	12	21.64	0-3	3
		25	24	21.56	0-3	3
		50	0	21.63	0-3	3
	256QAM	1	0	19.47	0-5	5
		1	24	19.69	0-5	5
		1	49	19.61	0-5	5
		25	0	19.45	0-5	5
		25	12	19.63	0-5	5
		25	24	19.64	0-5	5
		50	0	19.72	0-5	5

[LTE FDD Band 13 Conducted Power_Antenna A_ *Pmax*, DSI = 0,1]

LTE FDD Band 13 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.98	0	0
		1	24	23.95	0	0
		1	49	23.83	0	0
		25	0	23.05	0-1	1
		25	12	22.97	0-1	1
		25	24	22.93	0-1	1
		50	0	23.17	0-1	1
	16QAM	1	0	23.16	0-1	1
		1	24	23.16	0-1	1
		1	49	23.13	0-1	1
		25	0	22.16	0-2	2
		25	12	22.04	0-2	2
		25	24	21.99	0-2	2
		50	0	22.25	0-2	2
	64QAM	1	0	22.34	0-2	2
		1	24	22.17	0-2	2
		1	49	22.08	0-2	2
		25	0	21.03	0-3	3
		25	12	21.08	0-3	3
		25	24	21.09	0-3	3
		50	0	21.23	0-3	3
	256QAM	1	0	19.39	0-5	5
		1	24	19.21	0-5	5
		1	49	18.94	0-5	5
		25	0	18.83	0-5	5
		25	12	19.13	0-5	5
		25	24	19.03	0-5	5
		50	0	19.13	0-5	5

[LTE FDD Band 13 Conducted Power_Antenna E_ *Pmax*, DSI = 0]

LTE FDD Band 13 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.74	0	0
		1	24	24.23	0	0
		1	49	24.40	0	0
		25	0	23.15	0-1	1
		25	12	23.06	0-1	1
		25	24	23.12	0-1	1
		50	0	23.18	0-1	1
	16QAM	1	0	23.30	0-1	1
		1	24	23.70	0-1	1
		1	49	23.37	0-1	1
		25	0	22.27	0-2	2
		25	12	22.02	0-2	2
		25	24	22.13	0-2	2
		50	0	21.88	0-2	2
	64QAM	1	0	22.48	0-2	2
		1	24	22.71	0-2	2
		1	49	22.30	0-2	2
		25	0	21.21	0-3	3
		25	12	21.11	0-3	3
		25	24	21.10	0-3	3
		50	0	21.19	0-3	3
	256QAM	1	0	19.21	0-5	5
		1	24	19.19	0-5	5
		1	49	18.88	0-5	5
		25	0	19.33	0-5	5
		25	12	19.10	0-5	5
		25	24	18.97	0-5	5
		50	0	19.01	0-5	5

[LTE FDD Band 14 Conducted Power_Antenna A_ *Pmax*, DSI = 0, 1]

LTE FDD Band 14 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23330 Ch. 793 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	23.68	0	0
		1	24	24.08	0	0
		1	49	23.68	0	0
		25	0	22.81	0-1	1
		25	12	22.76	0-1	1
		25	24	22.83	0-1	1
		50	0	22.84	0-1	1
	16QAM	1	0	22.76	0-1	1
		1	24	22.96	0-1	1
		1	49	23.02	0-1	1
		25	0	21.80	0-2	2
		25	12	21.78	0-2	2
		25	24	21.99	0-2	2
		50	0	21.87	0-2	2
	64QAM	1	0	22.00	0-2	2
		1	24	21.94	0-2	2
		1	49	21.83	0-2	2
		25	0	20.73	0-3	3
		25	12	20.74	0-3	3
		25	24	20.76	0-3	3
		50	0	20.95	0-3	3
	256QAM	1	0	18.63	0-5	5
		1	24	18.86	0-5	5
		1	49	18.42	0-5	5
		25	0	18.71	0-5	5
		25	12	18.99	0-5	5
		25	24	18.90	0-5	5
		50	0	18.80	0-5	5

[LTE FDD Band 14 Conducted Power_Antenna E_ *Pmax*, DSI = 0]

LTE FDD Band 14 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23330 Ch. 793 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	24.76	0	0
		1	24	24.81	0	0
		1	49	24.49	0	0
		25	0	23.58	0-1	1
		25	12	23.65	0-1	1
		25	24	23.57	0-1	1
		50	0	23.59	0-1	1
	16QAM	1	0	23.88	0-1	1
		1	24	23.72	0-1	1
		1	49	23.74	0-1	1
		25	0	22.54	0-2	2
		25	12	22.59	0-2	2
		25	24	22.61	0-2	2
		50	0	22.55	0-2	2
	64QAM	1	0	22.58	0-2	2
		1	24	22.71	0-2	2
		1	49	22.76	0-2	2
		25	0	21.60	0-3	3
		25	12	21.64	0-3	3
		25	24	21.58	0-3	3
		50	0	21.57	0-3	3
	256QAM	1	0	19.60	0-5	5
		1	24	19.76	0-5	5
		1	49	19.50	0-5	5
		25	0	19.56	0-5	5
		25	12	19.56	0-5	5
		25	24	19.60	0-5	5
		50	0	19.56	0-5	5

[LTE FDD Band 25 Conducted Power_Antenna A_ *Pmax*, DSI = 1]

LTE FDD Band 25 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	23.04	23.39	23.49	0	0
		1	49	23.06	23.33	23.23	0	0
		1	99	23.31	23.27	23.23	0	0
		50	0	22.07	22.27	22.33	0-1	1
		50	25	22.19	22.10	22.26	0-1	1
		50	49	22.22	22.31	22.34	0-1	1
		100	0	22.11	22.20	22.27	0-1	1
	16QAM	1	0	22.62	22.42	22.46	0-1	1
		1	49	22.29	22.55	22.50	0-1	1
		1	99	22.38	22.54	22.42	0-1	1
		50	0	21.17	21.36	21.31	0-2	2
		50	25	21.20	21.39	21.30	0-2	2
		50	49	21.24	20.96	21.33	0-2	2
		100	0	21.19	21.33	21.29	0-2	2
	64QAM	1	0	21.23	21.50	21.61	0-2	2
		1	49	21.26	21.57	21.57	0-2	2
		1	99	21.36	21.44	21.40	0-2	2
		50	0	20.11	20.36	20.33	0-3	3
		50	25	20.17	20.40	20.27	0-3	3
		50	49	20.18	20.35	20.32	0-3	3
		100	0	20.20	20.27	20.28	0-3	3
	256QAM	1	0	18.20	18.25	18.35	0-5	5
		1	49	18.26	18.37	18.56	0-5	5
		1	99	18.17	18.35	18.11	0-5	5
		50	0	18.12	18.34	18.26	0-5	5
		50	25	18.17	18.26	18.29	0-5	5
		50	49	18.15	18.28	18.26	0-5	5
		100	0	18.14	18.35	18.30	0-5	5

[LTE FDD Band 26 Conducted Power_Antenna A _ *Pmax*, DSI = 0, 1]

LTE FDD Band 26 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26865 Ch. 831.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	24.24	0	0
		1	36	23.48	0	0
		1	74	23.60	0	0
		36	0	22.72	0-1	1
		36	18	22.74	0-1	1
		36	39	22.62	0-1	1
		75	0	22.69	0-1	1
	16QAM	1	0	23.28	0-1	1
		1	36	22.73	0-1	1
		1	74	22.87	0-1	1
		36	0	21.70	0-2	2
		36	18	21.77	0-2	2
		36	39	21.68	0-2	2
		75	0	21.74	0-2	2
	64QAM	1	0	21.85	0-2	2
		1	36	21.98	0-2	2
		1	74	21.77	0-2	2
		36	0	20.70	0-3	3
		36	18	20.77	0-3	3
		36	39	20.75	0-3	3
		75	0	20.78	0-3	3
	256QAM	1	0	18.99	0-5	5
		1	36	18.83	0-5	5
		1	74	18.62	0-5	5
		36	0	18.72	0-5	5
		36	18	18.77	0-5	5
		36	39	18.67	0-5	5
		75	0	18.70	0-5	5

[LTE FDD Band 26 Conducted Power_Antenna E _ *Pmax*, DSI = 0]

LTE FDD Band 26 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26865 Ch. 831.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	24.36	0	0
		1	36	24.21	0	0
		1	74	24.27	0	0
		36	0	23.44	0-1	1
		36	18	23.39	0-1	1
		36	39	23.24	0-1	1
		75	0	23.40	0-1	1
	16QAM	1	0	23.63	0-1	1
		1	36	23.59	0-1	1
		1	74	23.48	0-1	1
		36	0	22.43	0-2	2
		36	18	22.35	0-2	2
		36	39	22.21	0-2	2
		75	0	22.35	0-2	2
	64QAM	1	0	22.53	0-2	2
		1	36	22.46	0-2	2
		1	74	22.52	0-2	2
		36	0	21.43	0-3	3
		36	18	21.40	0-3	3
		36	39	21.29	0-3	3
		75	0	21.33	0-3	3
	256QAM	1	0	19.65	0-5	5
		1	36	19.56	0-5	5
		1	74	19.39	0-5	5
		36	0	19.42	0-5	5
		36	18	19.29	0-5	5
		36	39	19.30	0-5	5
		75	0	19.31	0-5	5

[LTE TDD Band 30 Conducted Power_Antenna A _ *Pmax*, DSI = 1]

LTE TDD Band 30 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 ㎒			
10 ㎒	QPSK	1	0		22.02		0	0
		1	24		22.32		0	0
		1	49		22.13		0	0
		25	0		21.11		0-1	1
		25	12		21.11		0-1	1
		25	24		21.18		0-1	1
		50	0		21.14		0-1	1
	16QAM	1	0		21.19		0-1	1
		1	24		21.80		0-1	1
		1	49		21.29		0-1	1
		25	0		20.21		0-2	2
		25	12		20.30		0-2	2
		25	24		20.07		0-2	2
		50	0		20.20		0-2	2
	64QAM	1	0		20.17		0-2	2
		1	24		20.45		0-2	2
		1	49		20.07		0-2	2
		25	0		19.16		0-3	3
		25	12		19.14		0-3	3
		25	24		19.20		0-3	3
		50	0		19.10		0-3	3
	256QAM	1	0		17.42		0-5	5
		1	24		17.39		0-5	5
		1	49		17.19		0-5	5
		25	0		17.11		0-5	5
		25	12		17.18		0-5	5
		25	24		17.15		0-5	5
		50	0		17.29		0-5	5

[LTE TDD Band 38 Conducted Power_Antenna B_ *Pmax*, DSI = 1]

LTE TDD Band 38 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 2580 ㎒	38000 Ch. 2595 ㎒	38150 2610 ㎒		
20 ㎒	QPSK	1	0	24.05	24.10	24.10	0	0
		1	49	24.06	24.23	23.76	0	0
		1	99	24.05	23.89	23.71	0	0
		50	0	23.13	23.23	23.09	0-1	1
		50	25	23.25	23.24	23.04	0-1	1
		50	49	23.16	23.12	22.83	0-1	1
		100	0	23.14	23.18	22.96	0-1	1
	16QAM	1	0	23.11	23.22	23.18	0-1	1
		1	49	23.20	23.21	22.95	0-1	1
		1	99	23.20	22.98	22.65	0-1	1
		50	0	22.14	22.27	22.10	0-2	2
		50	25	22.23	22.25	22.04	0-2	2
		50	49	22.17	22.16	21.82	0-2	2
		100	0	22.19	22.20	22.01	0-2	2
	64QAM	1	0	22.29	22.23	22.21	0-2	2
		1	49	22.27	22.24	22.07	0-2	2
		1	99	22.21	22.02	21.82	0-2	2
		50	0	21.15	21.26	21.13	0-3	3
		50	25	21.23	21.23	21.05	0-3	3
		50	49	21.16	21.16	20.85	0-3	3
		100	0	21.18	21.19	21.03	0-3	3
	256QAM	1	0	19.07	19.15	19.06	0-5	5
		1	49	19.14	19.44	18.99	0-5	5
		1	99	19.10	18.78	18.50	0-5	5
		50	0	19.17	19.22	19.06	0-5	5
		50	25	19.23	19.22	19.04	0-5	5
		50	49	19.14	19.14	18.82	0-5	5
		100	0	19.16	19.14	18.97	0-5	5

[LTE FDD Band 66 Conducted Power_Antenna A_ *Pmax*, DSI = 1]

LTE FDD Band 66 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	23.09	23.45	23.55	0	0
		1	49	23.19	**23.63**	23.48	0	0
		1	99	23.14	23.46	23.43	0	0
		50	0	22.29	22.56	22.59	0-1	1
		50	25	22.38	22.60	22.61	0-1	1
		50	49	22.39	22.57	**22.62**	0-1	1
		100	0	22.27	22.56	**22.66**	0-1	1
	16QAM	1	0	22.32	23.12	23.34	0-1	1
		1	49	22.55	22.83	22.81	0-1	1
		1	99	22.40	22.71	22.64	0-1	1
		50	0	21.35	21.64	21.58	0-2	2
		50	25	21.44	21.59	21.68	0-2	2
		50	49	21.25	21.66	21.56	0-2	2
		100	0	21.33	21.58	21.63	0-2	2
	64QAM	1	0	21.27	21.75	21.60	0-2	2
		1	49	21.59	21.92	21.84	0-2	2
		1	99	21.90	21.67	21.67	0-2	2
		50	0	20.37	20.62	20.52	0-3	3
		50	25	20.44	20.65	20.66	0-3	3
		50	49	20.36	20.69	20.57	0-3	3
		100	0	20.29	20.54	20.62	0-3	3
	256QAM	1	0	18.20	18.53	18.52	0-5	5
		1	49	18.47	18.74	18.79	0-5	5
		1	99	18.44	18.70	18.64	0-5	5
		50	0	18.27	18.57	18.58	0-5	5
		50	25	18.36	18.62	18.67	0-5	5
		50	49	18.39	18.60	18.62	0-5	5
		100	0	18.37	18.61	18.55	0-5	5

[LTE FDD Band 71 Conducted Power_Antenna A_ *Pmax*, DSI = 0, 1]

LTE FDD Band 71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	23.67	0	0
		1	49	23.64	0	0
		1	99	23.35	0	0
		50	0	22.75	0-1	1
		50	25	22.68	0-1	1
		50	49	22.60	0-1	1
		100	0	22.65	0-1	1
	16QAM	1	0	23.15	0-1	1
		1	49	22.80	0-1	1
		1	99	22.57	0-1	1
		50	0	21.83	0-2	2
		50	25	21.67	0-2	2
		50	49	21.64	0-2	2
		100	0	21.68	0-2	2
	64QAM	1	0	21.93	0-2	2
		1	49	21.90	0-2	2
		1	99	21.47	0-2	2
		50	0	20.83	0-3	3
		50	25	20.68	0-3	3
		50	49	20.57	0-3	3
		100	0	20.64	0-3	3
	256QAM	1	0	18.86	0-5	5
		1	49	18.77	0-5	5
		1	99	18.59	0-5	5
		50	0	18.78	0-5	5
		50	25	18.73	0-5	5
		50	49	18.54	0-5	5
		100	0	18.61	0-5	5

[LTE FDD Band 71 Conducted Power_Antenna E_ *Pmax*, DSI = 0]

LTE FDD Band 71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	24.84	0	0
		1	49	24.63	0	0
		1	99	24.23	0	0
		50	0	23.71	0-1	1
		50	25	23.50	0-1	1
		50	49	23.55	0-1	1
		100	0	23.58	0-1	1
	16QAM	1	0	23.99	0-1	1
		1	49	23.77	0-1	1
		1	99	23.29	0-1	1
		50	0	22.58	0-2	2
		50	25	22.53	0-2	2
		50	49	22.51	0-2	2
		100	0	22.64	0-2	2
	64QAM	1	0	22.75	0-2	2
		1	49	22.49	0-2	2
		1	99	22.49	0-2	2
		50	0	21.63	0-3	3
		50	25	21.56	0-3	3
		50	49	21.54	0-3	3
		100	0	21.68	0-3	3
	256QAM	1	0	19.70	0-5	5
		1	49	19.73	0-5	5
		1	99	19.41	0-5	5
		50	0	19.79	0-5	5
		50	25	19.59	0-5	5
		50	49	19.55	0-5	5
		100	0	19.58	0-5	5

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

11.3.2 LTE Reduced Conducted Power

[LTE FDD Band 2 Conducted Power_ Antenna A _ DSI = 0]

LTE FDD Band 2 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	17.79	17.99	18.19	0	0
		1	49	17.82	18.03	18.48	0	0
		1	99	17.89	18.07	18.12	0	0
		50	0	17.91	18.13	18.12	0-1	0
		50	25	18.02	18.08	18.12	0-1	0
		50	49	18.10	18.17	18.22	0-1	0
		100	0	17.93	18.10	18.12	0-1	0
	16QAM	1	0	18.18	18.22	18.35	0-1	0
		1	49	18.10	18.05	18.15	0-1	0
		1	99	18.09	17.83	18.43	0-1	0
		50	0	17.91	18.07	18.14	0-2	0
		50	25	18.03	17.68	18.15	0-2	0
		50	49	17.96	18.19	18.19	0-2	0
		100	0	17.96	18.10	18.08	0-2	0
	64QAM	1	0	18.04	18.35	18.23	0-2	0
		1	49	18.04	18.45	18.29	0-2	0
		1	99	18.07	18.22	18.25	0-2	0
		50	0	17.94	18.14	18.19	0-3	0
		50	25	18.01	18.22	18.17	0-3	0
		50	49	18.02	18.13	18.11	0-3	0
		100	0	17.98	18.11	18.13	0-3	0
	256QAM	1	0	17.93	18.25	18.18	0-5	0
		1	49	17.95	18.25	18.40	0-5	0
		1	99	18.00	18.14	18.19	0-5	0
		50	0	17.94	18.13	18.20	0-5	0
		50	25	18.03	18.17	18.23	0-5	0
		50	49	18.01	18.20	18.25	0-5	0
		100	0	17.98	18.10	18.11	0-5	0

[LTE FDD Band 2 Conducted Power_ Antenna F (TX Hopping) _ DSI = 0]

LTE FDD Band 2 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	20.11	20.00	19.98	0	0
		1	49	19.94	20.10	20.01	0	0
		1	99	20.02	20.09	19.92	0	0
		50	0	20.07	20.12	19.95	0-1	0
		50	25	20.16	20.10	20.05	0-1	0
		50	49	20.06	20.13	19.99	0-1	0
		100	0	20.11	20.09	20.06	0-1	0
	16QAM	1	0	20.14	20.75	20.41	0-1	0
		1	49	20.29	20.33	20.24	0-1	0
		1	99	20.23	20.17	20.09	0-1	0
		50	0	20.12	20.12	20.03	0-2	0
		50	25	20.17	20.18	20.02	0-2	0
		50	49	20.17	20.15	20.08	0-2	0
		100	0	20.14	20.12	20.11	0-2	0
	64QAM	1	0	19.97	20.17	20.05	0-2	0
		1	49	19.71	20.26	19.99	0-2	0
		1	99	19.76	20.06	20.07	0-2	0
		50	0	19.38	20.15	19.94	0-3	0
		50	25	20.15	20.20	20.15	0-3	0
		50	49	19.61	20.21	19.96	0-3	0
		100	0	19.79	20.05	19.69	0-3	0
	256QAM	1	0	18.23	18.89	18.06	0-5	1.5
		1	49	19.01	19.12	18.25	0-5	1.5
		1	99	18.32	18.97	18.55	0-5	1.5
		50	0	18.85	18.77	18.37	0-5	1.5
		50	25	18.71	18.71	18.36	0-5	1.5
		50	49	18.54	18.82	18.37	0-5	1.5
		100	0	18.58	18.68	18.21	0-5	1.5

[LTE FDD Band 4 Conducted Power _ Antenna A_ *Pmax*, DSI = 1]

LTE FDD Band 4 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	18.90	0	0
		1	49	19.23	0	0
		1	99	19.22	0	0
		50	0	19.12	0-1	0
		50	25	19.24	0-1	0
		50	49	19.26	0-1	0
		100	0	19.25	0-1	0
	16QAM	1	0	18.96	0-1	0
		1	49	19.66	0-1	0
		1	99	19.25	0-1	0
		50	0	19.18	0-2	0
		50	25	19.21	0-2	0
		50	49	19.17	0-2	0
		100	0	19.18	0-2	0
	64QAM	1	0	19.05	0-2	0
		1	49	19.32	0-2	0
		1	99	19.35	0-2	0
		50	0	19.11	0-3	0
		50	25	19.21	0-3	0
		50	49	18.60	0-3	0
		100	0	19.20	0-3	0
	256QAM	1	0	18.86	0-5	0.5
		1	49	18.48	0-5	0.5
		1	99	18.94	0-5	0.5
		50	0	19.04	0-5	0.5
		50	25	18.42	0-5	0.5
		50	49	18.60	0-5	0.5
		100	0	18.54	0-5	0.5

[LTE FDD Band 4 Conducted Power _ Antenna F (TX Hopping) _ DSI = 0]

LTE FDD Band 4 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	20.17	0	0
		1	49	20.16	0	0
		1	99	20.01	0	0
		50	0	20.10	0-1	0
		50	25	20.16	0-1	0
		50	49	20.28	0-1	0
		100	0	20.16	0-1	0
	16QAM	1	0	20.37	0-1	0
		1	49	20.49	0-1	0
		1	99	20.41	0-1	0
		50	0	20.15	0-2	0
		50	25	20.21	0-2	0
		50	49	20.35	0-2	0
		100	0	20.19	0-2	0
	64QAM	1	0	20.36	0-2	0
		1	49	20.42	0-2	0
		1	99	20.43	0-2	0
		50	0	20.20	0-3	0
		50	25	20.24	0-3	0
		50	49	20.28	0-3	0
		100	0	20.26	0-3	0
	256QAM	1	0	18.88	0-5	1.5
		1	49	18.97	0-5	1.5
		1	99	18.94	0-5	1.5
		50	0	18.71	0-5	1.5
		50	25	18.78	0-5	1.5
		50	49	18.78	0-5	1.5
		100	0	18.81	0-5	1.5

[LTE FDD Band 7 Conducted Power _ Antenna B_DSI = 0]

LTE FDD Band 7 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	20.29	20.05	20.22	0	0
		1	49	19.96	19.79	20.30	0	0
		1	99	19.90	19.93	20.24	0	0
		50	0	20.13	20.02	20.25	0-1	0
		50	25	20.01	19.97	20.32	0-1	0
		50	49	19.94	19.93	20.34	0-1	0
		100	0	20.01	20.03	20.33	0-1	0
	16QAM	1	0	20.33	20.33	20.40	0-1	0
		1	49	20.10	20.05	20.56	0-1	0
		1	99	20.22	20.03	20.44	0-1	0
		50	0	20.05	20.05	20.24	0-2	0
		50	25	20.05	19.99	20.35	0-2	0
		50	49	19.97	20.05	20.22	0-2	0
		100	0	20.04	20.05	20.38	0-2	0
	64QAM	1	0	20.17	20.18	20.24	0-2	0
		1	49	20.19	20.04	20.37	0-2	0
		1	99	19.96	20.17	20.45	0-2	0
		50	0	20.12	20.10	20.29	0-3	0
		50	25	20.07	20.02	20.35	0-3	0
		50	49	20.02	20.04	20.42	0-3	0
		100	0	20.10	19.99	20.38	0-3	0
	256QAM	1	0	18.19	18.23	18.38	0-5	2
		1	49	18.28	18.27	18.41	0-5	2
		1	99	18.13	18.21	18.57	0-5	2
		50	0	18.22	18.11	18.31	0-5	2
		50	25	18.12	18.09	18.35	0-5	2
		50	49	18.15	18.12	18.41	0-5	2
		100	0	18.14	18.07	18.39	0-5	2

[LTE FDD Band 7 Conducted Power _ Antenna F (TX Hopping) _DSI = 0]

LTE FDD Band 7 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	19.53	19.43	19.35	0	0
		1	49	19.51	19.38	19.41	0	0
		1	99	19.39	19.36	19.37	0	0
		50	0	19.66	19.54	19.61	0-1	0
		50	25	19.54	19.52	19.59	0-1	0
		50	49	19.57	19.51	19.59	0-1	0
		100	0	19.53	19.50	19.55	0-1	0
	16QAM	1	0	19.88	19.70	19.65	0-1	0
		1	49	19.70	19.74	19.65	0-1	0
		1	99	19.71	19.59	19.75	0-1	0
		50	0	19.67	19.54	19.62	0-2	0
		50	25	19.55	19.54	19.65	0-2	0
		50	49	19.59	19.56	19.61	0-2	0
		100	0	19.57	19.54	19.51	0-2	0
	64QAM	1	0	19.71	19.67	19.84	0-2	0
		1	49	19.82	19.79	19.56	0-2	0
		1	99	19.66	19.54	19.72	0-2	0
		50	0	19.75	19.56	19.59	0-3	0
		50	25	19.60	19.53	19.62	0-3	0
		50	49	19.48	19.56	19.62	0-3	0
		100	0	19.67	19.55	19.60	0-3	0
	256QAM	1	0	18.29	18.30	18.20	0-5	1.5
		1	49	18.18	18.27	17.96	0-5	1.5
		1	99	18.30	18.11	18.18	0-5	1.5
		50	0	18.14	17.99	18.05	0-5	1.5
		50	25	18.11	18.06	18.06	0-5	1.5
		50	49	18.04	18.06	18.01	0-5	1.5
		100	0	18.13	18.07	18.11	0-5	1.5

[LTE FDD Band 25 Conducted Power_Antenna A_ DSI = 0]

LTE FDD Band 25 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	17.62	18.17	17.78	0	0
		1	49	17.66	17.87	17.82	0	0
		1	99	17.81	17.78	17.68	0	0
		50	0	17.70	17.93	17.81	0-1	0
		50	25	17.78	17.94	17.77	0-1	0
		50	49	17.88	17.96	17.85	0-1	0
		100	0	17.73	17.84	17.82	0-1	0
	16QAM	1	0	18.05	17.99	18.04	0-1	0
		1	49	17.90	18.12	18.02	0-1	0
		1	99	18.01	18.04	17.91	0-1	0
		50	0	17.71	17.91	17.84	0-2	0
		50	25	17.76	17.83	17.87	0-2	0
		50	49	17.89	17.97	17.91	0-2	0
		100	0	17.76	17.89	17.76	0-2	0
	64QAM	1	0	17.97	18.06	17.95	0-2	0
		1	49	17.92	18.23	18.05	0-2	0
		1	99	18.09	18.01	17.96	0-2	0
		50	0	17.73	17.94	17.93	0-3	0
		50	25	17.85	17.88	17.79	0-3	0
		50	49	17.88	18.02	17.93	0-3	0
		100	0	17.73	17.86	17.87	0-3	0
	256QAM	1	0	17.98	17.93	17.90	0-5	0
		1	49	17.98	18.03	18.03	0-5	0
		1	99	18.11	18.14	17.83	0-5	0
		50	0	18.16	17.94	17.94	0-5	0
		50	25	17.75	18.02	17.87	0-5	0
		50	49	18.16	18.00	17.87	0-5	0
		100	0	18.06	17.94	17.85	0-5	0

[LTE FDD Band 25 Conducted Power_Antenna F (TX Hopping) _ DSI = 0]

LTE FDD Band 25 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	19.92	20.02	20.17	0	0
		1	49	20.03	20.03	19.84	0	0
		1	99	19.97	19.94	19.85	0	0
		50	0	19.99	20.09	19.90	0-1	0
		50	25	20.06	20.07	20.05	0-1	0
		50	49	20.02	20.08	19.94	0-1	0
		100	0	20.09	20.03	19.97	0-1	0
	16QAM	1	0	20.06	20.28	20.08	0-1	0
		1	49	20.32	20.28	20.03	0-1	0
		1	99	20.13	20.18	20.21	0-1	0
		50	0	20.03	20.09	20.00	0-2	0
		50	25	20.09	20.14	20.10	0-2	0
		50	49	20.04	20.18	20.02	0-2	0
		100	0	20.06	20.05	20.05	0-2	0
	64QAM	1	0	20.15	20.18	20.17	0-2	0
		1	49	20.30	20.31	20.13	0-2	0
		1	99	20.21	20.15	20.08	0-2	0
		50	0	19.94	20.07	20.03	0-3	0
		50	25	20.10	20.03	20.05	0-3	0
		50	49	19.99	20.16	20.02	0-3	0
		100	0	19.97	20.14	20.12	0-3	0
	256QAM	1	0	18.74	18.79	18.66	0-5	1.5
		1	49	18.75	18.88	18.50	0-5	1.5
		1	99	18.64	18.71	18.60	0-5	1.5
		50	0	18.60	18.67	18.61	0-5	1.5
		50	25	18.68	18.62	18.68	0-5	1.5
		50	49	18.67	18.72	18.63	0-5	1.5
		100	0	18.67	18.68	18.66	0-5	1.5

[LTE TDD Band 30 Conducted Power_Antenna A _ DSI = 0]

LTE TDD Band 30 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 ㎒			
10 ㎒	QPSK	1	0		19.14		0	0
		1	24		18.87		0	0
		1	49		18.80		0	0
		25	0		18.95		0-1	0
		25	12		18.90		0-1	0
		25	24		18.91		0-1	0
		50	0		18.81		0-1	0
	16QAM	1	0		19.14		0-1	0
		1	24		19.25		0-1	0
		1	49		19.14		0-1	0
		25	0		18.91		0-2	0
		25	12		18.93		0-2	0
		25	24		18.97		0-2	0
		50	0		18.94		0-2	0
	64QAM	1	0		19.09		0-2	0
		1	24		18.93		0-2	0
		1	49		18.90		0-2	0
		25	0		19.04		0-3	0
		25	12		18.96		0-3	0
		25	24		18.94		0-3	0
		50	0		18.82		0-3	0
	256QAM	1	0		17.49		0-5	1.5
		1	24		17.70		0-5	1.5
		1	49		17.87		0-5	1.5
		25	0		17.49		0-5	1.5
		25	12		17.57		0-5	1.5
		25	24		17.58		0-5	1.5
		50	0		17.59		0-5	1.5

[LTE TDD Band 30 Conducted Power_Antenna F (TX Hopping) _ DSI = 0]

LTE TDD Band 30 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 ㎒			
10 ㎒	QPSK	1	0		19.76		0	0
		1	24		20.05		0	0
		1	49		19.78		0	0
		25	0		19.94		0-1	0
		25	12		19.90		0-1	0
		25	24		19.88		0-1	0
		50	0		19.89		0-1	0
	16QAM	1	0		20.04		0-1	0
		1	24		20.03		0-1	0
		1	49		20.03		0-1	0
		25	0		19.98		0-2	0
		25	12		19.96		0-2	0
		25	24		19.97		0-2	0
		50	0		19.84		0-2	0
	64QAM	1	0		20.24		0-2	0
		1	24		20.21		0-2	0
		1	49		19.97		0-2	0
		25	0		19.62		0-3	1
		25	12		19.56		0-3	1
		25	24		19.48		0-3	1
		50	0		19.65		0-3	1
	256QAM	1	0		17.62		0-5	3
		1	24		17.56		0-5	3
		1	49		17.53		0-5	3
		25	0		17.56		0-5	3
		25	12		17.55		0-5	3
		25	24		17.47		0-5	3
		50	0		17.53		0-5	3

[LTE TDD Band 38 Conducted Power_Antenna B_ DSI = 0]

LTE TDD Band 38 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 2580 ㎒	38000 Ch. 2595 ㎒	38150 2610 ㎒		
20 ㎒	QPSK	1	0	22.38	22.47	22.40	0	0
		1	49	22.49	22.55	22.32	0	0
		1	99	22.39	22.34	22.13	0	0
		50	0	22.56	22.64	22.50	0-1	0
		50	25	22.59	22.61	22.47	0-1	0
		50	49	22.56	22.48	22.22	0-1	0
		100	0	22.59	22.56	22.38	0-1	0
	16QAM	1	0	22.48	22.64	22.48	0-1	0
		1	49	22.68	22.73	22.34	0-1	0
		1	99	22.46	22.40	22.08	0-1	0
		50	0	22.36	22.42	22.28	0-2	0
		50	25	22.42	22.42	22.21	0-2	0
		50	49	22.35	22.29	22.04	0-2	0
		100	0	22.38	22.35	22.20	0-2	0
	64QAM	1	0	22.46	22.58	22.45	0-2	0
		1	49	22.54	22.45	22.22	0-2	0
		1	99	22.38	21.72	22.12	0-2	0
		50	0	21.37	21.44	21.29	0-3	1
		50	25	21.40	21.40	21.21	0-3	1
		50	49	21.36	21.30	21.00	0-3	1
		100	0	21.39	21.34	21.19	0-3	1
	256QAM	1	0	19.22	19.38	19.34	0-5	3
		1	49	19.33	19.39	19.08	0-5	3
		1	99	19.15	19.08	18.78	0-5	3
		50	0	19.36	19.39	19.31	0-5	3
		50	25	19.41	19.40	19.25	0-5	3
		50	49	19.35	19.35	19.04	0-5	3
		100	0	19.40	19.36	19.19	0-5	3

[LTE TDD Band 38 Conducted Power_Antenna F _ DSI = 0]

LTE TDD Band 38 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 2580 ㎒	38000 Ch. 2595 ㎒	38150 2610 ㎒		
20 ㎒	QPSK	1	0	21.10	21.23	21.30	0	0
		1	49	21.20	21.32	21.21	0	0
		1	99	21.21	21.23	21.11	0	0
		50	0	21.25	21.37	21.40	0-1	0
		50	25	21.33	21.36	21.34	0-1	0
		50	49	21.30	21.31	21.19	0-1	0
		100	0	21.34	21.34	21.30	0-1	0
	16QAM	1	0	21.16	21.34	21.28	0-1	0
		1	49	21.31	21.36	21.20	0-1	0
		1	99	21.16	21.34	21.30	0-1	0
		50	0	21.32	21.39	21.41	0-2	0
		50	25	21.37	21.40	21.33	0-2	0
		50	49	21.33	21.36	21.22	0-2	0
		100	0	21.34	21.34	21.32	0-2	0
	64QAM	1	0	21.38	21.41	21.49	0-2	0
		1	49	21.36	21.49	21.33	0-2	0
		1	99	21.36	21.41	21.25	0-2	0
		50	0	21.06	21.21	21.20	0-3	0
		50	25	21.15	21.16	21.13	0-3	0
		50	49	21.13	21.07	20.98	0-3	0
		100	0	21.11	21.11	21.09	0-3	0
	256QAM	1	0	19.20	19.06	19.09	0-5	0
		1	49	19.08	19.27	19.27	0-5	0
		1	99	18.92	18.87	18.86	0-5	0
		50	0	19.10	19.21	19.17	0-5	0
		50	25	19.16	19.17	19.14	0-5	0
		50	49	19.12	19.12	19.00	0-5	0
		100	0	19.16	19.15	19.15	0-5	0

[LTE TDD Band 41_Power Class 3_Conducted Power_Antenna B_ DSI = 0]

LTE TDD Band 41 _ Power Class 3_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	22.26	22.33	22.49	22.24	22.26	0	0
		1	49	22.33	22.43	22.46	22.32	22.37	0	0
		1	99	22.20	22.41	22.32	22.18	22.22	0	0
		50	0	22.41	22.42	22.58	22.34	22.43	0-1	0
		50	25	22.43	22.56	22.57	22.37	22.41	0-1	0
		50	49	22.29	22.54	22.51	22.44	22.45	0-1	0
		100	0	22.35	22.45	22.49	22.34	22.41	0-1	0
	16QAM	1	0	22.32	22.43	22.58	22.29	22.35	0-1	0
		1	49	22.39	22.50	22.46	22.32	22.54	0-1	0
		1	99	22.24	22.48	22.20	22.30	22.15	0-1	0
		50	0	22.17	22.26	22.33	22.13	22.23	0-2	0
		50	25	22.23	22.36	22.35	22.14	22.22	0-2	0
		50	49	22.07	22.33	22.33	22.23	22.26	0-2	0
		100	0	22.17	22.34	22.31	22.10	22.16	0-2	0
	64QAM	1	0	22.36	22.26	22.41	22.13	22.27	0-2	0
		1	49	22.20	22.48	22.31	22.35	22.27	0-2	0
		1	99	22.17	22.33	22.32	22.22	22.12	0-2	0
		50	0	21.21	21.27	21.36	21.13	21.24	0-3	1
		50	25	21.24	21.38	21.38	21.15	21.24	0-3	1
		50	49	21.05	21.35	21.28	21.24	21.25	0-3	1
		100	0	21.19	21.34	21.30	21.15	21.24	0-3	1
	256QAM	1	0	19.11	19.02	19.18	18.99	19.14	0-5	3
		1	49	19.17	19.20	19.31	19.16	19.30	0-5	3
		1	99	18.96	19.21	19.03	19.05	18.96	0-5	3
		50	0	19.18	19.21	19.34	19.14	19.25	0-5	3
		50	25	19.18	19.36	19.39	19.16	19.19	0-5	3
		50	49	19.08	19.33	19.32	19.24	19.25	0-5	3
		100	0	19.16	19.31	19.34	19.15	19.19	0-5	3

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 2_Conducted Power_Antenna B_ DSI = 0]

LTE TDD Band 41 _ Power Class 2_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	23.79	23.89	24.00	23.60	23.81	0	0
		1	49	23.65	23.94	23.96	23.80	23.80	0	0
		1	99	23.60	23.92	23.68	23.73	23.63	0	0
		50	0	23.85	23.93	24.01	23.81	23.86	0-1	0
		50	25	23.89	24.01	24.06	23.84	23.91	0-1	0
		50	49	23.75	24.05	23.98	23.85	23.85	0-1	0
		100	0	23.86	23.95	23.99	23.80	23.84	0-1	0
	16QAM	1	0	24.08	24.32	24.04	23.99	24.14	0-1	0
		1	49	24.14	24.28	24.17	24.28	24.05	0-1	0
		1	99	23.91	24.21	23.99	24.06	23.86	0-1	0
		50	0	23.72	23.74	23.84	23.62	23.73	0-2	0
		50	25	23.69	23.85	23.82	23.67	23.74	0-2	0
		50	49	23.60	23.81	23.78	23.68	23.73	0-2	0
		100	0	23.64	23.78	23.81	23.61	23.67	0-2	0
	64QAM	1	0	23.95	24.01	24.13	23.89	24.08	0-2	0
		1	49	23.99	24.15	24.20	24.04	24.06	0-2	0
		1	99	23.88	24.05	23.85	23.88	23.94	0-2	0
		50	0	22.67	22.78	22.88	22.61	22.74	0-3	1
		50	25	22.71	22.82	22.87	22.66	22.72	0-3	1
		50	49	22.59	22.85	22.75	22.74	22.67	0-3	1
		100	0	22.66	22.82	22.80	22.60	22.64	0-3	1
	256QAM	1	0	20.79	20.78	20.91	20.67	20.83	0-5	3
		1	49	20.75	20.88	21.00	20.85	20.90	0-5	3
		1	99	20.72	20.94	20.95	20.84	20.51	0-5	3
		50	0	20.69	20.74	20.87	20.63	20.72	0-5	3
		50	25	20.67	20.85	20.86	20.63	20.72	0-5	3
		50	49	20.56	20.80	20.77	20.68	20.72	0-5	3
		100	0	20.69	20.79	20.81	20.62	20.66	0-5	3

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 3_Conducted Power_Antenna F)_DSI = 0]

LTE TDD Band 41 _ Power Class 3_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	19.27	19.14	19.03	19.10	19.08	0	0
		1	49	19.22	19.07	19.12	19.14	19.11	0	0
		1	99	19.19	19.07	19.01	19.03	18.85	0	0
		50	0	19.37	19.28	19.17	19.18	19.16	0-1	0
		50	25	19.35	19.29	19.24	19.27	19.23	0-1	0
		50	49	19.33	19.22	19.20	19.26	19.12	0-1	0
		100	0	19.34	19.24	19.22	19.26	19.14	0-1	0
	16QAM	1	0	19.46	19.28	19.06	19.19	19.13	0-1	0
		1	49	19.26	19.12	19.18	19.25	19.16	0-1	0
		1	99	19.27	19.17	19.19	19.13	18.87	0-1	0
		50	0	19.39	19.32	19.21	19.17	19.16	0-2	0
		50	25	19.42	19.28	19.26	19.31	19.22	0-2	0
		50	49	19.35	19.19	19.28	19.28	19.12	0-2	0
		100	0	19.36	19.24	19.25	19.29	19.18	0-2	0
	64QAM	1	0	19.34	19.27	19.21	19.23	19.20	0-2	0
		1	49	19.37	19.24	19.36	19.37	19.16	0-2	0
		1	99	19.39	19.18	19.19	19.24	18.95	0-2	0
		50	0	19.37	19.29	19.16	19.19	19.16	0-3	0
		50	25	19.39	19.27	19.26	19.29	19.22	0-3	0
		50	49	19.33	19.23	19.24	19.27	19.10	0-3	0
		100	0	19.35	19.26	19.26	19.26	19.17	0-3	0
	256QAM	1	0	19.09	18.91	18.71	18.78	19.05	0-5	0
		1	49	19.14	19.04	19.05	19.17	18.96	0-5	0
		1	99	18.97	18.90	18.82	18.86	18.80	0-5	0
		50	0	19.14	19.08	18.94	18.97	18.96	0-5	0
		50	25	19.14	19.08	19.05	19.07	19.02	0-5	0
		50	49	19.12	19.04	19.04	19.05	18.92	0-5	0
		100	0	19.13	19.04	19.03	19.07	18.97	0-5	0

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 2_Conducted Power_Antenna F _ DSI = 0]

LTE TDD Band 41 _ Power Class 2_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Reduced Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	21.05	20.82	20.71	20.80	20.72	0	0
		1	49	21.02	20.81	20.87	20.85	20.79	0	0
		1	99	20.96	20.76	20.74	20.70	20.60	0	0
		50	0	21.08	20.97	20.87	20.90	20.82	0-1	0
		50	25	21.07	20.98	20.98	20.94	20.87	0-1	0
		50	49	21.02	20.90	20.90	20.94	20.80	0-1	0
		100	0	21.03	20.91	20.92	20.92	20.84	0-1	0
	16QAM	1	0	21.35	21.21	21.06	21.09	21.13	0-1	0
		1	49	21.15	21.10	21.14	21.31	21.07	0-1	0
		1	99	21.28	21.06	21.08	21.10	20.93	0-1	0
		50	0	21.06	20.97	20.88	20.87	20.86	0-2	0
		50	25	21.06	20.97	20.93	20.95	20.92	0-2	0
		50	49	21.09	20.91	20.93	20.94	20.84	0-2	0
		100	0	21.04	20.89	20.92	20.94	20.89	0-2	0
	64QAM	1	0	21.30	21.23	21.16	21.21	21.19	0-2	0
		1	49	21.29	21.29	21.15	21.15	21.12	0-2	0
		1	99	21.36	21.17	21.09	21.22	20.92	0-2	0
		50	0	21.09	20.99	20.89	20.87	20.82	0-3	0
		50	25	21.10	20.95	20.99	20.97	20.88	0-3	0
		50	49	21.08	20.92	20.89	20.94	20.76	0-3	0
		100	0	21.07	20.90	20.90	20.94	20.86	0-3	0
	256QAM	1	0	20.93	20.79	20.67	20.76	20.71	0-5	0
		1	49	21.13	20.88	20.81	21.01	20.80	0-5	0
		1	99	20.86	20.62	20.81	20.77	20.61	0-5	0
		50	0	20.75	20.79	20.62	20.64	20.62	0-5	0
		50	25	20.82	20.80	20.70	20.75	20.70	0-5	0
		50	49	20.82	20.71	20.68	20.71	20.57	0-5	0
		100	0	20.83	20.75	20.71	20.73	20.62	0-5	0

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 48 Conducted Power_Antenna F_ DSI = 0]

LTE TDD Band 48 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]				MPR Allowed Per 3GPP [dB]	MPR [dB]
				55340Ch. 3560.0 ㎒	55773 Ch. 3603.3 ㎒	56207 Ch. 3646.7 ㎒	56640 Ch. 3690.0 ㎒		
20 ㎒	QPSK	1	0	20.99	20.93	20.81	20.63	0	0
		1	49	20.96	20.96	20.77	20.74	0	0
		1	99	20.92	20.97	20.72	20.91	0	0
		50	0	20.98	21.03	20.88	20.79	0-1	0
		50	25	21.08	21.19	20.88	20.95	0-1	0
		50	49	21.06	21.12	20.92	21.00	0-1	0
		100	0	21.06	21.11	20.85	20.88	0-1	0
	16QAM	1	0	21.00	20.97	20.79	20.67	0-1	0
		1	49	20.90	20.97	20.84	20.77	0-1	0
		1	99	21.01	21.14	20.92	20.93	0-1	0
		50	0	20.29	20.31	20.15	20.11	0-2	0.5
		50	25	20.39	20.44	20.13	20.26	0-2	0.5
		50	49	20.36	20.45	20.18	20.28	0-2	0.5
		100	0	20.34	20.42	20.13	20.20	0-2	0.5
	64QAM	1	0	20.34	20.33	20.27	20.01	0-2	0.5
		1	49	20.41	20.46	20.22	20.20	0-2	0.5
		1	99	20.41	20.34	20.12	20.43	0-2	0.5
		50	0	19.29	19.37	19.14	19.10	0-3	1.5
		50	25	19.38	19.44	19.16	19.28	0-3	1.5
		50	49	19.37	19.48	19.22	19.32	0-3	1.5
		100	0	19.40	19.41	19.13	19.24	0-3	1.5
	256QAM	1	0	17.19	17.20	17.08	17.01	0-5	3.5
		1	49	17.31	17.31	16.89	17.14	0-5	3.5
		1	99	17.19	17.29	17.03	17.20	0-5	3.5
		50	0	17.26	17.33	17.14	17.07	0-5	3.5
		50	25	17.39	17.42	17.18	17.23	0-5	3.5
		50	49	17.34	17.39	17.21	17.31	0-5	3.5
		100	0	17.34	17.37	17.13	17.20	0-5	3.5

[LTE FDD Band 66 Conducted Power_Antenna A_ DSI = 0]

LTE FDD Band 66 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	18.21	18.53	18.51	0	0
		1	49	18.22	18.58	18.60	0	0
		1	99	18.39	18.43	18.53	0	0
		50	0	18.29	18.56	18.54	0-1	0
		50	25	18.40	18.66	18.58	0-1	0
		50	49	18.43	18.71	18.56	0-1	0
		100	0	18.31	18.56	18.61	0-1	0
	16QAM	1	0	18.15	19.01	18.76	0-1	0
		1	49	18.50	18.89	18.77	0-1	0
		1	99	18.68	18.86	18.91	0-1	0
		50	0	18.29	18.59	18.57	0-2	0
		50	25	18.42	18.66	18.67	0-2	0
		50	49	18.52	18.69	18.65	0-2	0
		100	0	18.38	18.60	18.63	0-2	0
	64QAM	1	0	18.45	18.87	18.63	0-2	0
		1	49	18.45	18.86	18.73	0-2	0
		1	99	18.71	18.54	18.74	0-2	0
		50	0	18.28	18.58	18.66	0-3	0
		50	25	18.43	18.63	18.68	0-3	0
		50	49	18.50	18.66	18.53	0-3	0
		100	0	18.44	18.67	18.68	0-3	0
	256QAM	1	0	18.36	18.47	18.60	0-5	0
		1	49	18.38	18.81	18.74	0-5	0
		1	99	18.45	18.67	18.58	0-5	0
		50	0	18.23	18.57	18.51	0-5	0
		50	25	18.41	18.62	18.67	0-5	0
		50	49	18.46	18.63	18.55	0-5	0
		100	0	18.41	18.54	18.65	0-5	0

[LTE FDD Band 66 Conducted Power_Antenna F (TX Hopping) _ DSI = 0]

LTE FDD Band 66 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	19.92	20.00	19.95	0	0
		1	49	20.08	20.03	20.18	0	0
		1	99	20.07	19.98	20.01	0	0
		50	0	20.14	19.99	20.06	0-1	0
		50	25	20.25	20.19	20.04	0-1	0
		50	49	20.27	20.23	20.21	0-1	0
		100	0	20.20	20.17	20.01	0-1	0
	16QAM	1	0	20.30	20.15	20.19	0-1	0
		1	49	20.34	20.33	20.41	0-1	0
		1	99	20.39	20.20	20.36	0-1	0
		50	0	20.19	20.16	20.12	0-2	0
		50	25	20.22	20.16	20.09	0-2	0
		50	49	20.19	20.19	20.14	0-2	0
		100	0	20.20	20.16	20.08	0-2	0
	64QAM	1	0	20.43	20.19	20.24	0-2	0
		1	49	20.37	20.28	20.44	0-2	0
		1	99	20.35	20.28	20.64	0-2	0
		50	0	20.16	20.10	20.10	0-3	0
		50	25	20.25	20.18	20.13	0-3	0
		50	49	20.17	20.19	20.17	0-3	0
		100	0	20.25	20.43	20.07	0-3	0
	256QAM	1	0	18.72	18.74	18.56	0-5	1.5
		1	49	18.86	18.79	18.91	0-5	1.5
		1	99	18.93	18.77	18.60	0-5	1.5
		50	0	18.68	18.69	18.68	0-5	1.5
		50	25	18.82	18.79	18.63	0-5	1.5
		50	49	18.76	18.73	18.78	0-5	1.5
		100	0	18.72	18.80	18.65	0-5	1.5

[LTE FDD Band 2 Conducted Power_ Antenna F (TX Hopping) _ DSI = 1]

LTE FDD Band 2 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 ㎒	18900 Ch. 1880 ㎒	19100 Ch. 1900 ㎒		
20 ㎒	QPSK	1	0	17.94	18.07	17.87	0	0
		1	49	18.06	18.12	17.97	0	0
		1	99	18.02	18.08	17.99	0	0
		50	0	18.11	18.19	18.05	0-1	0
		50	25	18.16	18.10	18.09	0-1	0
		50	49	18.09	18.21	18.18	0-1	0
		100	0	18.15	18.18	18.05	0-1	0
	16QAM	1	0	18.37	18.10	18.72	0-1	0
		1	49	18.47	18.24	18.10	0-1	0
		1	99	18.56	18.59	18.39	0-1	0
		50	0	18.10	18.15	17.99	0-2	0
		50	25	18.18	18.20	18.18	0-2	0
		50	49	18.16	18.09	18.05	0-2	0
		100	0	18.15	18.14	18.08	0-2	0
	64QAM	1	0	18.15	18.28	18.14	0-2	0
		1	49	18.36	18.49	18.09	0-2	0
		1	99	18.30	18.41	18.18	0-2	0
		50	0	18.09	18.16	18.09	0-3	0
		50	25	18.14	18.22	18.16	0-3	0
		50	49	18.04	18.16	18.16	0-3	0
		100	0	18.18	18.18	18.15	0-3	0
	256QAM	1	0	17.98	18.24	18.17	0-5	0
		1	49	17.54	18.33	18.12	0-5	0
		1	99	17.77	18.25	17.94	0-5	0
		50	0	17.78	18.17	18.09	0-5	0
		50	25	17.81	18.21	18.18	0-5	0
		50	49	17.77	18.19	17.96	0-5	0
		100	0	17.74	18.15	18.09	0-5	0

[LTE FDD Band 4 Conducted Power _ Antenna F (TX Hopping) _ DSI = 1]

LTE FDD Band 4 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20175 Ch. 1732.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	17.92	0	0
		1	49	18.07	0	0
		1	99	17.97	0	0
		50	0	18.15	0-1	0
		50	25	18.20	0-1	0
		50	49	18.25	0-1	0
		100	0	18.11	0-1	0
	16QAM	1	0	18.19	0-1	0
		1	49	18.35	0-1	0
		1	99	18.35	0-1	0
		50	0	18.11	0-2	0
		50	25	18.26	0-2	0
		50	49	18.20	0-2	0
		100	0	18.17	0-2	0
	64QAM	1	0	18.18	0-2	0
		1	49	18.43	0-2	0
		1	99	18.44	0-2	0
		50	0	18.21	0-3	0
		50	25	18.31	0-3	0
		50	49	18.34	0-3	0
		100	0	18.15	0-3	0
	256QAM	1	0	18.10	0-5	0
		1	49	18.28	0-5	0
		1	99	18.37	0-5	0
		50	0	18.24	0-5	0
		50	25	18.21	0-5	0
		50	49	18.27	0-5	0
		100	0	18.20	0-5	0

[LTE FDD Band 5 Conducted Power _ Antenna E_ DSI = 1]

LTE FDD Band 5 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 20525 Ch. 836.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	21.48	0	0
		1	24	21.58	0	0
		1	49	21.59	0	0
		25	0	21.30	0-1	0
		25	12	21.32	0-1	0
		25	24	21.35	0-1	0
		50	0	21.25	0-1	0
	16QAM	1	0	21.33	0-1	0
		1	24	21.41	0-1	0
		1	49	21.51	0-1	0
		25	0	21.30	0-2	0
		25	12	21.27	0-2	0
		25	24	21.32	0-2	0
		50	0	21.34	0-2	0
	64QAM	1	0	21.27	0-2	0
		1	24	21.52	0-2	0
		1	49	20.81	0-2	0
		25	0	21.33	0-3	0
		25	12	21.31	0-3	0
		25	24	21.30	0-3	0
		50	0	21.21	0-3	0
	256QAM	1	0	19.42	0-5	2
		1	24	19.55	0-5	2
		1	49	19.59	0-5	2
		25	0	19.35	0-5	2
		25	12	19.45	0-5	2
		25	24	19.21	0-5	2
		50	0	19.38	0-5	2

[LTE FDD Band 7 Conducted Power _ Antenna F (TX Hopping) _ DSI = 1]

LTE FDD Band 7 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 ㎒	21100 Ch. 2535 ㎒	21350 Ch. 2560 ㎒		
20 ㎒	QPSK	1	0	15.46	15.41	15.36	0	0
		1	49	15.48	15.33	15.37	0	0
		1	99	15.40	15.32	15.32	0	0
		50	0	15.55	15.43	15.53	0-1	0
		50	25	15.43	15.49	15.44	0-1	0
		50	49	15.50	15.48	15.42	0-1	0
		100	0	15.51	15.46	15.42	0-1	0
	16QAM	1	0	15.54	15.33	15.72	0-1	0
		1	49	15.63	15.61	15.66	0-1	0
		1	99	15.71	15.45	15.46	0-1	0
		50	0	15.52	15.45	15.50	0-2	0
		50	25	15.47	15.44	15.46	0-2	0
		50	49	15.45	15.43	15.46	0-2	0
		100	0	15.50	15.43	15.48	0-2	0
	64QAM	1	0	15.83	15.52	15.63	0-2	0
		1	49	15.44	15.43	15.62	0-2	0
		1	99	15.54	15.51	15.49	0-2	0
		50	0	15.65	15.50	15.53	0-3	0
		50	25	15.53	15.45	15.47	0-3	0
		50	49	15.47	15.47	15.49	0-3	0
		100	0	15.41	15.45	15.46	0-3	0
	256QAM	1	0	15.57	15.54	15.54	0-5	0
		1	49	15.77	15.41	15.58	0-5	0
		1	99	15.49	15.57	15.53	0-5	0
		50	0	15.48	15.40	15.47	0-5	0
		50	25	15.48	15.40	15.43	0-5	0
		50	49	15.51	15.44	15.43	0-5	0
		100	0	15.45	15.47	15.53	0-5	0

[LTE FDD Band 12 Conducted Power_Antenna E_ DSI = 1]

LTE FDD Band 12 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23095 Ch. 707.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	21.18	0	0
		1	24	21.07	0	0
		1	49	21.25	0	0
		25	0	21.09	0-1	0
		25	12	21.28	0-1	0
		25	24	21.25	0-1	0
		50	0	21.36	0-1	0
	16QAM	1	0	21.28	0-1	0
		1	24	21.26	0-1	0
		1	49	21.33	0-1	0
		25	0	21.13	0-2	0
		25	12	21.23	0-2	0
		25	24	21.22	0-2	0
		50	0	21.27	0-2	0
	64QAM	1	0	20.97	0-2	0
		1	24	21.36	0-2	0
		1	49	21.19	0-2	0
		25	0	21.17	0-3	0
		25	12	21.25	0-3	0
		25	24	21.19	0-3	0
		50	0	21.31	0-3	0
	256QAM	1	0	19.76	0-5	2
		1	24	19.42	0-5	2
		1	49	19.54	0-5	2
		25	0	19.53	0-5	2
		25	12	19.55	0-5	2
		25	24	19.52	0-5	2
		50	0	19.47	0-5	2

[LTE FDD Band 13 Conducted Power_Antenna E_ DSI = 1]

LTE FDD Band 13 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23230 Ch. 782 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	21.41	0	0
		1	24	21.49	0	0
		1	49	21.30	0	0
		25	0	21.31	0-1	0
		25	12	21.42	0-1	0
		25	24	21.59	0-1	0
		50	0	21.46	0-1	0
	16QAM	1	0	21.50	0-1	0
		1	24	21.55	0-1	0
		1	49	21.65	0-1	0
		25	0	21.43	0-2	0
		25	12	21.44	0-2	0
		25	24	21.60	0-2	0
		50	0	21.59	0-2	0
	64QAM	1	0	21.54	0-2	0
		1	24	21.54	0-2	0
		1	49	21.49	0-2	0
		25	0	21.67	0-3	0
		25	12	21.64	0-3	0
		25	24	21.36	0-3	0
		50	0	21.66	0-3	0
	256QAM	1	0	19.56	0-5	2
		1	24	19.60	0-5	2
		1	49	19.61	0-5	2
		25	0	19.62	0-5	2
		25	12	19.44	0-5	2
		25	24	19.87	0-5	2
		50	0	19.31	0-5	2

[LTE FDD Band 14 Conducted Power_Antenna E_ DSI = 1]

LTE FDD Band 14 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 23330 Ch. 793 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
10 ㎒	QPSK	1	0	21.43	0	0
		1	24	21.38	0	0
		1	49	21.30	0	0
		25	0	21.56	0-1	0
		25	12	21.44	0-1	0
		25	24	21.36	0-1	0
		50	0	21.62	0-1	0
	16QAM	1	0	21.45	0-1	0
		1	24	21.85	0-1	0
		1	49	21.40	0-1	0
		25	0	21.53	0-2	0
		25	12	21.48	0-2	0
		25	24	20.54	0-2	0
		50	0	21.85	0-2	0
	64QAM	1	0	20.95	0-2	0
		1	24	21.51	0-2	0
		1	49	21.03	0-2	0
		25	0	21.18	0-3	0
		25	12	20.47	0-3	0
		25	24	20.68	0-3	0
		50	0	20.90	0-3	0
	256QAM	1	0	19.68	0-5	2
		1	24	19.61	0-5	2
		1	49	19.70	0-5	2
		25	0	19.79	0-5	2
		25	12	19.65	0-5	2
		25	24	19.78	0-5	2
		50	0	19.60	0-5	2

[LTE FDD Band 25 Conducted Power_Antenna F (TX Hopping) _ DSI = 1]

LTE FDD Band 25 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 ㎒	26365 Ch. 1882.5 ㎒	26590 Ch. 1905 ㎒		
20 ㎒	QPSK	1	0	17.97	17.97	18.33	0	0
		1	49	17.98	18.05	17.81	0	0
		1	99	17.99	17.90	17.78	0	0
		50	0	17.99	18.05	18.01	0-1	0
		50	25	18.12	18.05	18.08	0-1	0
		50	49	18.10	18.10	17.98	0-1	0
		100	0	18.06	18.03	18.03	0-1	0
	16QAM	1	0	17.99	18.29	18.31	0-1	0
		1	49	18.26	18.39	17.94	0-1	0
		1	99	18.27	18.26	18.15	0-1	0
		50	0	18.03	18.13	17.98	0-2	0
		50	25	18.09	18.14	18.04	0-2	0
		50	49	18.13	18.15	18.02	0-2	0
		100	0	18.04	18.06	18.06	0-2	0
	64QAM	1	0	18.10	18.24	18.31	0-2	0
		1	49	18.27	18.20	18.07	0-2	0
		1	99	18.15	18.12	18.19	0-2	0
		50	0	18.02	18.13	18.05	0-3	0
		50	25	18.13	18.12	18.04	0-3	0
		50	49	18.10	18.11	17.97	0-3	0
		100	0	18.09	18.10	18.06	0-3	0
	256QAM	1	0	18.01	18.15	18.12	0-5	0
		1	49	18.27	18.28	18.11	0-5	0
		1	99	18.26	17.99	17.96	0-5	0
		50	0	18.08	18.14	17.98	0-5	0
		50	25	18.12	18.15	18.14	0-5	0
		50	49	18.04	18.12	17.98	0-5	0
		100	0	18.12	18.19	18.11	0-5	0

[LTE FDD Band 26 Conducted Power_Antenna E _ *Pmax*, DSI = 0]

LTE FDD Band 26 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 26865 Ch. 831.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
15 ㎒	QPSK	1	0	21.37	0	0
		1	36	21.41	0	0
		1	74	21.33	0	0
		36	0	21.46	0-1	0
		36	18	21.49	0-1	0
		36	39	21.46	0-1	0
		75	0	21.51	0-1	0
	16QAM	1	0	21.60	0-1	0
		1	36	21.66	0-1	0
		1	74	21.53	0-1	0
		36	0	21.46	0-2	0
		36	18	21.54	0-2	0
		36	39	21.40	0-2	0
		75	0	21.59	0-2	0
	64QAM	1	0	21.47	0-2	0
		1	36	21.67	0-2	0
		1	74	21.50	0-2	0
		36	0	21.53	0-3	0
		36	18	21.55	0-3	0
		36	39	21.46	0-3	0
		75	0	21.48	0-3	0
	256QAM	1	0	18.65	0-5	2
		1	36	19.69	0-5	2
		1	74	19.26	0-5	2
		36	0	19.61	0-5	2
		36	18	19.59	0-5	2
		36	39	19.59	0-5	2
		75	0	19.18	0-5	2

[LTE TDD Band 30 Conducted Power_Antenna F (TX Hopping)_ DSI = 1]

LTE TDD Band 30 _ 10 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 ㎒			
10 ㎒	QPSK	1	0		16.28		0	0
		1	24		16.87		0	0
		1	49		16.86		0	0
		25	0		16.40		0-1	0
		25	12		16.44		0-1	0
		25	24		16.41		0-1	0
		50	0		16.39		0-1	0
	16QAM	1	0		16.71		0-1	0
		1	24		16.57		0-1	0
		1	49		16.50		0-1	0
		25	0		16.48		0-2	0
		25	12		16.45		0-2	0
		25	24		16.38		0-2	0
		50	0		16.44		0-2	0
	64QAM	1	0		16.58		0-2	0
		1	24		16.61		0-2	0
		1	49		16.50		0-2	0
		25	0		16.43		0-3	0
		25	12		16.40		0-3	0
		25	24		16.46		0-3	0
		50	0		16.47		0-3	0
	256QAM	1	0		16.37		0-5	0
		1	24		16.90		0-5	0
		1	49		16.41		0-5	0
		25	0		16.54		0-5	0
		25	12		16.53		0-5	0
		25	24		16.49		0-5	0
		50	0		16.44		0-5	0

[LTE TDD Band 38 Conducted Power_Antenna F (TX Hopping)_ DSI = 1]

LTE TDD Band 38 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 2580 ㎒	38000 Ch. 2595 ㎒	38150 2610 ㎒		
20 ㎒	QPSK	1	0	19.22	19.27	19.32	0	0
		1	49	19.26	19.36	19.31	0	0
		1	99	19.23	19.24	19.12	0	0
		50	0	19.28	19.42	19.37	0-1	0
		50	25	19.37	19.41	19.36	0-1	0
		50	49	19.31	19.35	19.23	0-1	0
		100	0	19.31	19.39	19.31	0-1	0
	16QAM	1	0	19.33	19.36	19.40	0-1	0
		1	49	19.52	19.43	19.33	0-1	0
		1	99	19.31	19.41	19.09	0-1	0
		50	0	19.30	19.47	19.45	0-2	0
		50	25	19.40	19.46	19.40	0-2	0
		50	49	19.36	19.33	19.24	0-2	0
		100	0	19.36	19.40	19.33	0-2	0
	64QAM	1	0	19.36	19.43	19.52	0-2	0
		1	49	19.46	19.57	19.49	0-2	0
		1	99	19.47	19.42	19.22	0-2	0
		50	0	19.32	19.41	19.41	0-3	0
		50	25	19.40	19.39	19.35	0-3	0
		50	49	19.34	19.32	19.23	0-3	0
		100	0	19.35	19.34	19.33	0-3	0
	256QAM	1	0	19.15	19.21	19.16	0-5	0
		1	49	19.05	19.24	19.10	0-5	0
		1	99	19.06	18.94	18.85	0-5	0
		50	0	19.11	19.24	19.20	0-5	0
		50	25	19.25	19.23	19.19	0-5	0
		50	49	19.15	19.14	19.03	0-5	0
		100	0	19.19	19.19	19.16	0-5	0

[LTE TDD Band 41_Power Class 3_Conducted Power_Antenna B_DSI = 1]

LTE TDD Band 41 _ Power Class 3_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	20.81	20.93	21.02	20.78	20.64	0	0
		1	49	20.78	21.00	21.00	20.81	20.71	0	0
		1	99	20.84	20.91	20.94	20.71	20.54	0	0
		50	0	20.84	20.91	20.86	20.86	20.65	0-1	1
		50	25	20.93	20.98	20.89	20.87	20.67	0-1	1
		50	49	20.80	20.93	20.83	20.82	20.59	0-1	1
		100	0	20.86	20.98	20.84	20.84	20.64	0-1	1
	16QAM	1	0	20.74	20.88	20.69	20.72	20.47	0-1	1
		1	49	20.85	20.88	20.72	20.84	20.59	0-1	1
		1	99	20.79	20.89	20.61	20.64	20.40	0-1	1
		50	0	20.87	20.89	20.86	20.84	20.68	0-2	2
		50	25	20.88	20.97	20.89	20.84	20.65	0-2	2
		50	49	20.81	20.96	20.85	20.85	20.68	0-2	2
		100	0	20.86	20.95	20.85	20.84	20.66	0-2	2
	64QAM	1	0	20.90	21.00	20.97	21.00	20.80	0-2	2
		1	49	21.07	21.16	20.96	20.97	20.78	0-2	2
		1	99	20.97	21.01	20.90	20.89	20.62	0-2	2
		50	0	20.88	20.92	20.90	20.88	20.66	0-3	3
		50	25	20.92	21.01	20.91	20.91	20.68	0-3	3
		50	49	20.84	21.00	20.84	20.85	20.61	0-3	3
		100	0	20.88	20.98	20.87	20.88	20.68	0-3	3
	256QAM	1	0	19.09	19.31	19.12	19.29	19.03	0-5	5
		1	49	19.28	19.38	19.24	19.06	18.97	0-5	5
		1	99	19.24	19.12	19.17	19.02	18.93	0-5	5
		50	0	19.27	19.30	19.31	19.26	19.06	0-5	5
		50	25	19.35	19.42	19.33	19.27	19.09	0-5	5
		50	49	19.23	19.37	19.24	19.26	19.06	0-5	5
		100	0	19.27	19.40	19.26	19.27	19.07	0-5	5

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 2_Conducted Power_Antenna B_DSI = 1]

LTE TDD Band 41 Power Class 2 _ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	22.52	22.59	22.60	22.50	22.33	0	0
		1	49	22.54	22.53	22.49	22.54	22.33	0	0
		1	99	22.55	22.54	22.41	22.40	22.17	0	0
		50	0	22.49	22.53	22.50	22.51	22.31	0-1	1
		50	25	22.53	22.63	22.52	22.52	22.29	0-1	1
		50	49	22.47	22.63	22.50	22.48	22.25	0-1	1
		100	0	22.49	22.57	22.51	22.50	22.29	0-1	1
	16QAM	1	0	22.64	22.70	22.75	22.73	22.52	0-1	1
		1	49	22.75	22.83	22.72	22.74	22.50	0-1	1
		1	99	22.73	22.77	22.62	22.49	22.37	0-1	1
		50	0	22.53	22.54	22.53	22.49	22.31	0-2	2
		50	25	22.59	22.68	22.50	22.52	22.29	0-2	2
		50	49	22.48	22.64	22.49	22.48	22.29	0-2	2
		100	0	22.54	22.61	22.51	22.50	22.28	0-2	2
	64QAM	1	0	22.84	22.93	22.85	22.89	22.55	0-2	2
		1	49	22.84	22.95	22.80	22.80	22.51	0-2	2
		1	99	22.84	22.85	22.62	22.70	22.47	0-2	2
		50	0	22.52	22.57	22.51	22.49	22.31	0-3	3
		50	25	22.56	22.68	22.49	22.52	22.30	0-3	3
		50	49	22.51	22.64	22.48	22.48	22.27	0-3	3
		100	0	22.49	22.60	22.49	22.44	22.24	0-3	3
	256QAM	1	0	21.39	21.36	21.55	21.61	21.37	0-5	5
		1	49	21.67	21.69	21.55	21.59	21.31	0-5	5
		1	99	21.46	21.59	21.43	21.22	21.13	0-5	5
		50	0	21.43	21.49	21.43	21.41	21.22	0-5	5
		50	25	21.46	21.57	21.43	21.44	21.22	0-5	5
		50	49	21.41	21.51	21.39	21.39	21.14	0-5	5
		100	0	21.46	21.51	21.41	21.41	21.21	0-5	5

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 3_Conducted Power_Antenna F_ DSI = 1]

LTE TDD Band 41 _ Power Class 3_ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	17.75	17.66	17.76	17.60	17.56	0	0
		1	49	17.72	17.60	17.67	17.64	17.61	0	0
		1	99	17.66	17.60	17.53	17.57	17.38	0	0
		50	0	17.84	17.77	17.88	17.67	17.64	0-1	0
		50	25	17.85	17.75	17.76	17.77	17.68	0-1	0
		50	49	17.86	17.73	17.74	17.75	17.64	0-1	0
		100	0	17.84	17.74	17.74	17.75	17.67	0-1	0
	16QAM	1	0	17.81	17.75	17.79	17.64	17.60	0-1	0
		1	49	17.82	17.72	17.71	17.75	17.72	0-1	0
		1	99	17.87	17.68	17.72	17.65	17.45	0-1	0
		50	0	17.87	17.78	17.71	17.72	17.66	0-2	0
		50	25	17.89	17.76	17.77	17.81	17.72	0-2	0
		50	49	17.88	17.73	17.75	17.78	17.65	0-2	0
		100	0	17.88	17.72	17.75	17.72	17.70	0-2	0
	64QAM	1	0	17.92	17.89	17.70	17.71	17.66	0-2	0
		1	49	17.93	17.82	17.79	17.73	17.67	0-2	0
		1	99	17.80	17.78	17.66	17.73	17.48	0-2	0
		50	0	17.88	17.83	17.73	17.73	17.69	0-3	0
		50	25	17.91	17.77	17.78	17.85	17.74	0-3	0
		50	49	17.92	17.72	17.72	17.79	17.62	0-3	0
		100	0	17.86	17.74	17.78	17.74	17.71	0-3	0
	256QAM	1	0	17.85	17.68	17.55	17.76	17.52	0-5	0
		1	49	17.83	17.64	17.85	17.86	17.77	0-5	0
		1	99	17.61	17.69	17.54	17.67	17.34	0-5	0
		50	0	17.87	17.81	17.68	17.71	17.69	0-5	0
		50	25	17.90	17.81	17.79	17.79	17.72	0-5	0
		50	49	17.87	17.78	17.75	17.80	17.64	0-5	0
		100	0	17.87	17.81	17.78	17.81	17.73	0-5	0

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 41_Power Class 2_Conducted Power_Antenna F_ DSI = 1]

LTE TDD Band 41 Power Class 2 _ 20 ㎒ Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 ㎒	40185 Ch. 2549.5 ㎒	40620 Ch. 2593.0 ㎒	41055 Ch. 2636.5 ㎒	41490 Ch. 2680.0 ㎒		
20 ㎒	QPSK	1	0	19.65	19.33	19.66	19.30	19.25	0	0
		1	49	19.50	19.30	19.33	19.35	19.24	0	0
		1	99	19.56	19.28	19.20	19.25	19.07	0	0
		50	0	19.56	19.46	19.32	19.38	19.35	0-1	0
		50	25	19.53	19.40	19.46	19.49	19.36	0-1	0
		50	49	19.58	19.39	19.59	19.43	19.27	0-1	0
		100	0	19.53	19.40	19.37	19.43	19.35	0-1	0
	16QAM	1	0	19.81	19.74	19.64	19.53	19.53	0-1	0
		1	49	19.87	19.72	19.69	19.57	19.73	0-1	0
		1	99	19.81	19.73	19.65	19.47	19.48	0-1	0
		50	0	19.59	19.45	19.37	19.37	19.37	0-2	0
		50	25	19.58	19.46	19.45	19.48	19.39	0-2	0
		50	49	19.56	19.41	19.43	19.49	19.31	0-2	0
		100	0	19.54	19.40	19.42	19.45	19.35	0-2	0
	64QAM	1	0	19.91	19.76	19.60	19.66	19.76	0-2	0
		1	49	19.78	19.65	19.70	19.73	19.61	0-2	0
		1	99	19.88	19.67	19.64	19.57	19.41	0-2	0
		50	0	19.57	19.48	19.34	19.36	19.30	0-3	0
		50	25	19.58	19.45	19.47	19.47	19.39	0-3	0
		50	49	19.56	19.41	19.38	19.48	19.34	0-3	0
		100	0	19.58	19.43	19.45	19.47	19.41	0-3	0
	256QAM	1	0	19.56	19.56	19.50	19.45	19.58	0-5	0
		1	49	19.82	19.63	19.60	19.63	19.58	0-5	0
		1	99	19.49	19.46	19.42	19.60	19.28	0-5	0
		50	0	19.52	19.49	19.36	19.37	19.37	0-5	0
		50	25	19.61	19.48	19.44	19.49	19.35	0-5	0
		50	49	19.59	19.45	19.43	19.48	19.31	0-5	0
		100	0	19.53	19.45	19.40	19.47	19.38	0-5	0

Note; LTE TDD Band 41 has 5 required test channels per FCC KDB 447498 D04v01.

[LTE TDD Band 48 Conducted Power_Antenna F_ DSI = 1]

LTE TDD Band 48 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]				MPR Allowed Per 3GPP [dB]	MPR [dB]
				55340Ch. 3560.0 ㎒	55773 Ch. 3603.3 ㎒	56207 Ch. 3646.7 ㎒	56640 Ch. 3690.0 ㎒		
20 ㎒	QPSK	1	0	17.85	17.93	**17.76**	17.62	0	0
		1	49	17.91	**18.01**	17.72	17.76	0	0
		1	99	**17.95**	17.93	17.67	**17.88**	0	0
		50	0	17.99	18.03	17.84	17.75	0-1	0
		50	25	**18.11**	**18.16**	17.86	17.95	0-1	0
		50	49	18.07	18.14	**17.94**	**17.97**	0-1	0
		100	0	18.03	**18.13**	17.86	17.89	0-1	0
	16QAM	1	0	17.99	18.05	17.87	17.71	0-1	0
		1	49	18.07	17.98	17.79	17.79	0-1	0
		1	99	17.85	18.04	17.86	17.90	0-1	0
		50	0	17.97	18.07	17.86	17.75	0-2	0
		50	25	18.06	18.13	17.85	17.92	0-2	0
		50	49	18.07	18.14	17.90	17.97	0-2	0
		100	0	18.04	18.09	17.85	17.93	0-2	0
	64QAM	1	0	18.05	18.10	17.91	17.70	0-2	0
		1	49	18.14	18.23	17.91	17.88	0-2	0
		1	99	18.13	18.19	17.86	18.01	0-2	0
		50	0	17.98	18.04	17.87	17.77	0-3	0
		50	25	18.10	18.16	17.85	17.94	0-3	0
		50	49	18.06	18.16	17.93	17.99	0-3	0
		100	0	18.07	18.12	17.87	17.89	0-3	0
	256QAM	1	0	17.20	17.24	17.15	17.01	0-5	0.5
		1	49	17.25	17.31	17.11	17.01	0-5	0.5
		1	99	17.15	17.33	17.08	17.26	0-5	0.5
		50	0	17.27	17.31	17.18	17.09	0-5	0.5
		50	25	17.40	17.47	17.19	17.20	0-5	0.5
		50	49	17.37	17.45	17.24	17.28	0-5	0.5
		100	0	17.35	17.41	17.14	17.22	0-5	0.5

[LTE FDD Band 66 Conducted Power_Antenna F (TX Hopping) _ DSI = 1]

LTE FDD Band 66 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 ㎒	132322 Ch. 1745 ㎒	132572 Ch. 1770 ㎒		
20 ㎒	QPSK	1	0	17.83	17.75	17.62	0	0
		1	49	17.81	17.84	17.77	0	0
		1	99	18.07	17.87	17.89	0	0
		50	0	17.86	17.85	17.81	0-1	0
		50	25	17.95	17.96	17.83	0-1	0
		50	49	17.99	17.90	17.87	0-1	0
		100	0	17.97	17.92	17.89	0-1	0
	16QAM	1	0	18.17	17.85	17.94	0-1	0
		1	49	17.97	18.31	18.04	0-1	0
		1	99	18.33	18.11	18.14	0-1	0
		50	0	17.90	17.88	17.89	0-2	0
		50	25	18.03	18.01	17.84	0-2	0
		50	49	18.08	18.00	17.97	0-2	0
		100	0	17.94	17.94	17.91	0-2	0
	64QAM	1	0	18.10	17.91	17.98	0-2	0
		1	49	18.09	17.96	18.12	0-2	0
		1	99	18.06	18.02	18.15	0-2	0
		50	0	17.90	17.94	17.89	0-3	0
		50	25	18.04	18.01	17.90	0-3	0
		50	49	18.03	17.98	18.00	0-3	0
		100	0	17.94	17.92	17.90	0-3	0
	256QAM	1	0	17.82	17.90	17.88	0-5	0
		1	49	18.18	18.18	18.05	0-5	0
		1	99	18.14	18.13	17.86	0-5	0
		50	0	17.84	17.87	17.82	0-5	0
		50	25	18.04	17.93	17.91	0-5	0
		50	49	17.96	17.91	18.03	0-5	0
		100	0	18.03	17.93	17.85	0-5	0

[LTE FDD Band 71 Conducted Power_Antenna E_ DSI = 1]

LTE FDD Band 71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Reduced Power [dBm] 133297 Ch. 680.5 ㎒	MPR Allowed Per 3GPP [dB]	MPR [dB]
20 ㎒	QPSK	1	0	21.35	0	0
		1	49	21.53	0	0
		1	99	21.26	0	0
		50	0	21.66	0-1	0
		50	25	21.68	0-1	0
		50	49	21.55	0-1	0
		100	0	21.65	0-1	0
	16QAM	1	0	21.66	0-1	0
		1	49	21.87	0-1	0
		1	99	21.43	0-1	0
		50	0	21.75	0-2	0
		50	25	21.59	0-2	0
		50	49	21.41	0-2	0
		100	0	21.54	0-2	0
	64QAM	1	0	21.82	0-2	0
		1	49	21.78	0-2	0
		1	99	21.57	0-2	0
		50	0	21.74	0-3	0
		50	25	21.60	0-3	0
		50	49	21.63	0-3	0
		100	0	20.86	0-3	0
	256QAM	1	0	19.94	0-5	2
		1	49	19.60	0-5	2
		1	99	19.48	0-5	2
		50	0	19.83	0-5	2
		50	25	19.69	0-5	2
		50	49	19.72	0-5	2
		100	0	19.98	0-5	2

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

11.4 NR Maximum Output Power

Only the Conducted Power measurement results of the maximum bandwidth, which is the SAR test condition of NR Bands according to FCC KDB 941225 D05, are included, and the measurement results of other bandwidths are listed in Appendix L.

11.4.1 NR Band Maximum Conducted Power

[NR FDD Band n2 Conducted Power _ Antenna A _ *Pmax*, DSI = 1]

NR FDD Band n2 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376000		
							1880 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.60		0
				1	108		23.66		0
				1	214		23.77		0
				108	0		23.23		0.5
				108	54		23.80		0
				108	108		23.43		0.5
				216	0		23.24		0.5
			QPSK	1	1		23.65		0
				1	108		23.57		0
				1	214		23.68		0
				108	0		22.83		1
				108	54		23.77		0
				108	108		22.83		1
				216	0		22.64		1
			16QAM	1	1		22.84		1
			64QAM	1	1		21.03		2.5
			256QAM	1	1		18.96		4.5
		CP	QPSK	1	1		22.04		1.5

[NR FDD Band n5 Conducted Power_ Antenna A_ ASDIV_*Pmax*, DSI = 0, 1]

NR FDD Band n5_ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							167300		
							836.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.70		0
				1	53		23.58		0
				1	104		23.52		0
				50	0		23.09		0.5
				50	28		23.64		0
				50	56		23.03		0.5
				100	0		23.05		0.5
			QPSK	1	1		23.72		0
				1	53		23.52		0
				1	104		23.53		0
				50	0		22.60		1
				50	28		23.54		0
				50	56		22.55		1
				100	0		22.57		1
			16QAM	1	1		22.56		1
			64QAM	1	1		21.26		2.5
			256QAM	1	1		18.53		4.5
		CP	QPSK	1	1		22.27		1.5

[NR FDD Band n5 Conducted Power_ Antenna E_*Pmax*, DSI = 0]

NR FDD Band n5_ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							167300		
							836.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		24.76		0
				1	53		24.70		0
				1	104		24.48		0
				50	0		24.03		0.5
				50	28		24.64		0
				50	56		23.92		0.5
				100	0		24.11		0.5
			QPSK	1	1		24.65		0
				1	53		24.65		0
				1	104		24.44		0
				50	0		23.48		1
				50	28		24.55		0
				50	56		23.43		1
				100	0		23.63		1
			16QAM	1	1		23.41		1
			64QAM	1	1		22.12		2.5
			256QAM	1	1		19.46		4.5
		CP	QPSK	1	1		23.24		1.5

[NR FDD Band n7 Conducted Power_ Antenna B_*Pmax*, DSI = 1]

NR FDD Band n7 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							507000		
							2535 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.02		0
				1	108		23.01		0
				1	214		23.01		0
				108	0		22.83		0.5
				108	54		23.45		0
				108	108		22.87		0.5
				216	0		22.78		0.5
			QPSK	1	1		23.10		0
				1	108		23.04		0
				1	214		23.30		0
				108	0		22.31		1
				108	54		23.25		0
				108	108		22.37		1
				216	0		22.28		1
			16QAM	1	1		22.42		1
			64QAM	1	1		20.55		2.5
			256QAM	1	1		18.37		4.5
		CP	QPSK	1	1		21.60		1.5

[NR FDD Band n12 Conducted Power_Antenna A_ *Pmax*, DSI = 0, 1]

NR FDD Band n12_ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							141500		
							707.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.77		0
				1	40		23.59		0
				1	77		23.70		0
				36	0		23.28		0.5
				36	22		23.73		0
				36	43		23.21		0.5
				75	0		23.19		0.5
			QPSK	1	1		23.35		0
				1	40		23.33		0
				1	77		23.54		0
				36	0		22.67		1
				36	22		23.68		0
				36	43		22.73		1
				75	0		22.70		1
			16QAM	1	1		22.56		1
			64QAM	1	1		20.58		2.5
			256QAM	1	1		18.94		4.5
		CP	QPSK	1	1		22.09		1.5

[NR FDD Band n12 Conducted Power_Antenna E_ ASDIV_ *Pmax*, DSI = 0]

NR FDD Band n12_ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							141500		
							707.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		24.41		0
				1	40		24.32		0
				1	77		24.20		0
				36	0		23.86		0.5
				36	22		24.37		0
				36	43		23.79		0.5
				75	0		23.76		0.5
			QPSK	1	1		23.70		0
				1	40		24.20		0
				1	77		24.24		0
				36	0		23.38		1
				36	22		24.22		0
				36	43		23.33		1
				75	0		23.28		1
			16QAM	1	1		22.80		1
			64QAM	1	1		21.23		2.5
			256QAM	1	1		19.33		4.5
		CP	QPSK	1	1		22.23		1.5

[NR FDD Band n25 Conducted Power_ Antenna A _ *Pmax*, DSI = 1]

NR FDD Band n25 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376500		
							1882.5 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.32		0
				1	108		23.23		0
				1	214		23.15		0
				108	0		22.88		0.5
				108	54		23.51		0
				108	108		22.73		0.5
				216	0		22.83		0.5
			QPSK	1	1		23.27		0
				1	108		23.21		0
				1	214		23.13		0
				108	0		22.45		1
				108	54		23.45		0
				108	108		22.22		1
				216	0		22.25		1
			16QAM	1	1		22.36		1
			64QAM	1	1		20.46		2.5
			256QAM	1	1		18.65		4.5
		CP	QPSK	1	1		21.74		1.5

[NR FDD Band n26 Conducted Power_ Antenna E_*Pmax*, DSI = 0]

NR FDD Band n26 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							166300		
							831.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.03		0
				1	53		24.35		0
				1	104		24.19		0
				50	0		23.67		0.5
				50	28		24.34		0
				50	56		23.67		0.5
				100	0		23.83		0.5
			QPSK	1	1		24.31		0
				1	53		24.26		0
				1	104		24.18		0
				50	0		23.17		1
				50	28		24.12		0
				50	56		23.19		1
				100	0		23.30		1
			16QAM	1	1		23.02		1
			64QAM	1	1		21.70		2.5
			256QAM	1	1		19.16		4.5
		CP	QPSK	1	1		22.93		1.5

[NR FDD Band n26 Conducted Power_ Antenna A_ ASDIV _*Pmax*, DSI = 0, 1]

NR FDD Band n26 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							166300		
							831.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.72		0
				1	53		23.62		0
				1	104		23.49		0
				50	0		23.14		0.5
				50	28		23.61		0
				50	56		23.09		0.5
				100	0		23.09		0.5
			QPSK	1	1		23.73		0
				1	53		23.54		0
				1	104		23.55		0
				50	0		22.68		1
				50	28		23.57		0
				50	56		22.55		1
				100	0		22.57		1
			16QAM	1	1		22.54		1
			64QAM	1	1		21.27		2.5
			256QAM	1	1		18.61		4.5
		CP	QPSK	1	1		22.21		1.5

[NR FDD Band n30 Conducted Power_Antenna A_TX Hopping_ *Pmax*, DSI = 1]

NR FDD Band n30_ 10 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							462000		
							2310 ㎒		
10 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		22.60		0
				1	26		22.48		0
				1	50		22.37		0
				25	0		22.03		0.5
				25	14		22.57		0
				25	27		21.83		0.5
				50	0		21.93		0.5
			QPSK	1	1		22.48		0
				1	26		22.48		0
				1	50		22.49		0
				25	0		21.48		1
				25	14		22.44		0
				25	27		21.36		1
				50	0		21.44		1
			16QAM	1	1		21.36		1
			64QAM	1	1		20.15		2.5
			256QAM	1	1		17.12		4.5
		CP	QPSK	1	1		20.88		1.5

[NR TDD Band n38 Conducted Power_ Power Class 3 Only_Antenna B_TX Hopping, *Pmax,* DSI = 1]

NR TDD Band n38 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							519000		
							2595 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		24.04		0
				1	80		24.69		0
				1	158		24.24		0
				80	0		24.28		0.5
				80	40		24.78		0
				80	80		24.00		0.5
				160	0		24.09		0.5
			QPSK	1	1		24.69		0
				1	80		24.60		0
				1	158		24.18		0
				80	0		23.72		1
				80	40		24.68		0
				80	80		23.52		1
				160	0		23.58		1
			16QAM	1	1		23.59		1
			64QAM	1	1		21.69		2.5
			256QAM	1	1		19.88		4.5
		CP	QPSK	1	80		23.30		1.5

[NR FDD Band n66 Conducted Power _ Antenna A_*Pmax*, DSI = 1]

NR FDD Band n66 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.54		0
				1	108		23.38		0
				1	214		23.26		0
				108	0		23.16		0.5
				108	54		23.75		0
				108	108		23.10		0.5
				216	0		23.08		0.5
			QPSK	1	1		23.23		0
				1	108		23.63		0
				1	214		23.45		0
				108	0		22.51		1
				108	54		23.65		0
				108	108		22.60		1
				216	0		22.57		1
			16QAM	1	1		22.74		1
			64QAM	1	1		20.71		2.5
			256QAM	1	1		18.58		4.5
		CP	QPSK	1	1		21.92		1.5

[NR FDD Band n70 Conducted Power_Antenna A_ *Pmax*, DSI = 1]

NR FDD Band n70 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							340500		
							1702.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		23.59		0
				1	40		23.45		0
				1	77		23.27		0
				36	0		22.98		0.5
				36	22		23.51		0
				36	43		22.87		0.5
				75	0		22.89		0.5
			QPSK	1	1		23.37		0
				1	40		23.26		0
				1	77		23.23		0
				36	0		22.50		1
				36	22		23.44		0
				36	43		22.41		1
				75	0		22.44		1
			16QAM	1	1		22.21		1
			64QAM	1	1		20.87		2.5
			256QAM	1	1		18.26		4.5
		CP	QPSK	1	1		21.61		1.5

[NR FDD Band n71 Conducted Power_Antenna A_ *Pmax*, DSI=0, 1]

NR FDD Band n71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							136100		
							680.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		24.80		0
				1	53		24.73		0
				1	104		24.10		0
				50	0		24.06		0.5
				50	28		24.62		0
				50	56		23.98		0.5
				100	0		24.10		0.5
			QPSK	1	1		24.68		0
				1	53		24.63		0
				1	104		24.51		0
				50	0		23.59		1
				50	28		24.61		0
				50	56		23.43		1
				100	0		23.65		1
			16QAM	1	1		23.36		1
			64QAM	1	1		22.16		2.5
			256QAM	1	1		19.51		4.5
		CP	QPSK	1	1		23.24		1.5

[NR FDD Band n71 Conducted Power_Antenna E_ASDIV_ *Pmax,* DSI=0]

NR FDD Band n71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							136100		
							680.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		24.77		0
				1	53		24.71		0
				1	104		24.05		0
				50	0		24.11		0.5
				50	28		24.61		0
				50	56		23.97		0.5
				100	0		24.13		0.5
			QPSK	1	1		24.72		0
				1	53		24.62		0
				1	104		24.49		0
				50	0		23.63		1
				50	28		24.59		0
				50	56		23.48		1
				100	0		23.64		1
			16QAM	1	1		23.45		1
			64QAM	1	1		22.17		2.5
			256QAM	1	1		20.01		4.5
		CP	QPSK	1	1		23.17		1.5

11.4.2 NR Band Reduced Conducted Power

[NR FDD Band n2 Conducted Power _ Antenna A _ DSI = 0]

NR FDD Band n2 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376000		
							1880 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		19.01		0
				1	108		19.06		0
				1	214		18.97		0
				108	0		19.15		0
				108	54		19.17		0
				108	108		18.98		0
				216	0		19.03		0
			QPSK	1	1		18.89		0
				1	108		18.98		0
				1	214		18.92		0
				108	0		19.06		0
				108	54		19.07		0
				108	108		19.10		0
				216	0		18.98		0
			16QAM	1	1		18.77		0
			64QAM	1	1		19.08		0
			256QAM	1	1		18.25		0
		CP	QPSK	1	1		19.01		0

[NR FDD Band n2 Conducted Power _ Antenna F (TX Hopping) _ DSI = 0]

NR FDD Band n2 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376000		
							1880 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		19.84		0
				1	108		19.97		0
				1	214		20.00		0
				108	0		20.08		0
				108	54		20.00		0
				108	108		19.97		0
				216	0		20.04		0
			QPSK	1	1		20.05		0
				1	108		19.98		0
				1	214		19.88		0
				108	0		20.15		0
				108	54		19.91		0
				108	108		19.94		0
				216	0		20.09		0
			16QAM	1	1		19.83		0
			64QAM	1	1		20.11		0
			256QAM	1	1		18.53		1
		CP	QPSK	1	1		20.14		0

[NR FDD Band n5 Conducted Power_ Antenna E_DSI = 1]

NR FDD Band n5_ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							167300		
							836.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		21.54		0
				1	53		21.43		0
				1	104		21.26		0
				50	0		21.38		0
				50	28		21.37		0
				50	56		21.20		0
				100	0		21.40		0
			QPSK	1	1		21.50		0
				1	53		21.39		0
				1	104		21.28		0
				50	0		21.33		0
				50	28		21.31		0
				50	56		21.18		0
				100	0		21.36		0
			16QAM	1	1		21.29		0
			64QAM	1	1		21.40		0
			256QAM	1	1		19.44		1.5
		CP	QPSK	1	1		21.56		0

[NR FDD Band n7 Conducted Power_ Antenna B_DSI = 0]

NR FDD Band n7 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							507000		
							2535 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		19.89		0
				1	108		19.82		0
				1	214		20.11		0
				108	0		19.94		0
				108	54		19.97		0
				108	108		20.04		0
				216	0		19.91		0
			QPSK	1	1		19.84		0
				1	108		19.86		0
				1	214		20.13		0
				108	0		19.88		0
				108	54		19.86		0
				108	108		20.04		0
				216	0		19.92		0
			16QAM	1	1		19.71		0
			64QAM	1	1		19.91		0
			256QAM	1	1		17.94		1.5
		CP	QPSK	1	1		19.90		0

[NR FDD Band n7 Conducted Power_ Antenna F_TX Hopping_ DSI = 0]

NR FDD Band n7 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							507000		
							2535 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.04		0
				1	108		19.90		0
				1	214		19.99		0
				108	0		19.95		0
				108	54		20.04		0
				108	108		19.97		0
				216	0		19.93		0
			QPSK	1	1		19.98		0
				1	108		19.87		0
				1	214		20.01		0
				108	0		20.04		0
				108	54		19.96		0
				108	108		20.01		0
				216	0		19.98		0
			16QAM	1	1		19.85		0
			64QAM	1	1		20.09		0
			256QAM	1	1		18.10		1.5
		CP	QPSK	1	1		20.23		0

[NR FDD Band n25 Conducted Power_ Antenna A _ DSI = 0]

NR FDD Band n25 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376500		
							1882.5 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		18.76		0
				1	108		18.82		0
				1	214		18.70		0
				108	0		18.88		0
				108	54		18.79		0
				108	108		18.57		0
				216	0		18.64		0
			QPSK	1	1		18.67		0
				1	108		18.73		0
				1	214		18.79		0
				108	0		18.85		0
				108	54		18.72		0
				108	108		18.58		0
				216	0		18.73		0
			16QAM	1	1		18.60		0
			64QAM	1	1		18.73		0
			256QAM	1	1		18.24		0
		CP	QPSK	1	1		18.85		0

[NR FDD Band n25 Conducted Power_ Antenna F_TX Hopping _ DSI = 0]

NR FDD Band n25 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376500		
							1882.5 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.03		0
				1	108		20.16		0
				1	214		20.15		0
				108	0		20.20		0
				108	54		20.30		0
				108	108		20.04		0
				216	0		20.05		0
			QPSK	1	1		19.98		0
				1	108		20.21		0
				1	214		20.25		0
				108	0		20.22		0
				108	54		20.07		0
				108	108		20.01		0
				216	0		20.12		0
			16QAM	1	1		20.02		0
			64QAM	1	1		20.06		0
			256QAM	1	1		18.70		1
		CP	QPSK	1	1		20.19		0

[NR FDD Band n30 Conducted Power_Antenna A_TX Hopping_ DSI = 0]

NR FDD Band n30_ 10 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							462000		
							2310 ㎒		
10 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		18.70		0
				1	26		18.53		0
				1	50		18.55		0
				25	0		18.56		0
				25	14		18.53		0
				25	27		18.57		0
				50	0		18.53		0
			QPSK	1	1		18.57		0
				1	26		18.54		0
				1	50		18.55		0
				25	0		18.64		0
				25	14		18.54		0
				25	27		18.60		0
				50	0		18.62		0
			16QAM	1	1		18.61		0
			64QAM	1	1		18.22		0
			256QAM	1	1		17.14		1
		CP	QPSK	1	1		18.85		0

[NR FDD Band n30 Conducted Power_Antenna F_ DSI = 0]

NR FDD Band n30_ 10 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							462000		
							2310 ㎒		
10 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.07		0
				1	26		20.03		0
				1	50		19.94		0
				25	0		20.04		0
				25	14		19.98		0
				25	27		20.02		0
				50	0		20.01		0
			QPSK	1	1		20.06		0
				1	26		19.98		0
				1	50		19.99		0
				25	0		20.00		0
				25	14		19.98		0
				25	27		19.98		0
				50	0		20.01		0
			16QAM	1	1		19.87		0
			64QAM	1	1		20.07		0
			256QAM	1	1		17.58		2.5
		CP	QPSK	1	1		20.31		0

[NR TDD Band n38 Conducted Power_ Power Class 3 Only_Antenna B_TX Hopping, DSI = 0]

NR TDD Band n38 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							519000		
							2595 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.84		0
				1	53		20.74		0
				1	104		20.48		0
				50	0		20.83		0
				50	28		20.86		0
				50	56		20.75		0
				100	0		20.82		0
			QPSK	1	1		20.77		0
				1	53		20.68		0
				1	104		20.47		0
				50	0		20.85		0
				50	28		20.73		0
				50	56		20.71		0
				100	0		20.79		0
			16QAM	1	1		20.71		0
			64QAM	1	1		20.49		0
			256QAM	1	1		19.52		0.5
		CP	QPSK	1	1		20.88		0

[NR TDD Band n38 Conducted Power_ Power Class 3 Only_Antenna F_DSI = 0]

NR TDD Band n38 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							519000		
							2595 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		19.55		0
				1	80		19.58		0
				1	158		19.42		0
				80	0		19.71		0
				80	40		19.77		0
				80	80		19.60		0
				160	0		19.62		0
			QPSK	1	1		19.58		0
				1	80		19.59		0
				1	158		19.43		0
				80	0		19.68		0
				80	40		19.71		0
				80	80		19.58		0
				160	0		19.61		0
			16QAM	1	1		19.39		0
			64QAM	1	1		19.56		0
			256QAM	1	1		19.12		0
		CP	QPSK	1	80		19.71		0

[NR TDD Band n41 Conducted Power_ Antenna F_ DSI = 0 (Power Class 2 Only)]

NR TDD Band n41 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)					MPR [dB]
								518598			
								2592.99 ㎒			
100 ㎒	30	DFT-s	pi/2 BPSK	1	1			19.69			0
				1	137			19.52			0
				1	271			19.80			0
				135	0			19.51			0
				135	69			19.57			0
				135	138			19.59			0
				270	0			19.67			0
			QPSK	1	1			19.52			0
				1	137			19.40			0
				1	271			19.67			0
				135	0			19.65			0
				135	69			19.42			0
				135	138			19.53			0
				270	0			19.66			0
			16QAM	1	1			19.35			0
			64QAM	1	1			19.50			0
			256QAM	1	1			19.17			0
		CP	QPSK	1	1			19.83			0

[NR TDD Band n41 Conducted Power_Power Class 2 Only_ Antenna B_ TX Hopping_ DSI = 0]

NR TDD Band n41 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)					MPR [dB]
								518598			
								2592.99 ㎒			
100 ㎒	30	DFT-s	pi/2 BPSK	1	1			20.88			0
				1	137			20.52			0
				1	271			20.68			0
				135	0			20.74			0
				135	69			20.59			0
				135	138			20.64			0
				270	0			20.64			0
			QPSK	1	1			20.88			0
				1	137			20.49			0
				1	271			20.66			0
				135	0			20.74			0
				135	69			20.50			0
				135	138			20.59			0
				270	0			20.65			0
			16QAM	1	1			20.89			0
			64QAM	1	1			20.91			0
			256QAM	1	1			20.29			0
		CP	QPSK	1	1			20.74			0

[NR TDD Band n48 Conducted Power_Power Class 3 Only_Antenna F_ DSI = 0]

NR TDD Band n48 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]				MPR [dB]
						638000	641666		645332	
						3570 ㎒	3624.99 ㎒		3679.98 ㎒	
40 ㎒	30	DFT-s OFDM	pi/2 BPSK	1	1	18.79	19.24		19.67	0
				1	53	18.72	19.32		19.53	0
				1	104	18.82	19.53		19.39	0
				50	0	18.85	19.33		19.72	0
				50	28	18.90	19.50		19.78	0
				50	56	18.99	19.52		19.60	0
				100	0	18.93	19.38		19.65	0
			QPSK	1	1	18.74	19.13		19.36	0
				1	53	18.72	19.24		19.49	0
				1	104	18.80	19.36		19.62	0
				50	0	18.80	19.31		19.58	0
				50	28	18.95	19.45		19.69	0
				50	56	18.95	19.50		19.70	0
				100	0	18.91	19.42		19.60	0
			16QAM	1	1	18.53	19.03		19.48	0
			64QAM	1	1	18.59	19.28		19.58	0
			256QAM	1	1	16.95	17.41		17.91	1
		CP	QPSK	1	1	18.81	19.22		19.77	0

[NR FDD Band n66 Conducted Power _ Antenna A_DSI = 0]

NR FDD Band n66 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		18.82		0
				1	108		18.99		0
				1	214		18.87		0
				108	0		18.91		0
				108	54		18.96		0
				108	108		18.79		0
				216	0		18.80		0
			QPSK	1	1		18.70		0
				1	108		18.97		0
				1	214		18.84		0
				108	0		18.86		0
				108	54		18.88		0
				108	108		18.83		0
				216	0		18.84		0
			16QAM	1	1		18.55		0
			64QAM	1	1		18.78		0
			256QAM	1	1		18.14		0
		CP	QPSK	1	1		18.83		0

[NR FDD Band n66 Conducted Power _ Antenna F_TX Hopping_DSI = 0]

NR FDD Band n66 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.60		0
				1	108		20.56		0
				1	214		20.50		0
				108	0		20.60		0
				108	54		20.62		0
				108	108		20.50		0
				216	0		20.50		0
			QPSK	1	1		20.50		0
				1	108		20.52		0
				1	214		20.55		0
				108	0		20.57		0
				108	54		20.59		0
				108	108		20.52		0
				216	0		20.50		0
			16QAM	1	1		20.42		0
			64QAM	1	1		20.68		0
			256QAM	1	1		18.94		1
		CP	QPSK	1	1		20.64		0

[NR FDD Band n70 Conducted Power_Antenna A_ DSI = 0]

NR FDD Band n70 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							340500		
							1702.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		19.35		0
				1	40		19.27		0
				1	77		19.07		0
				36	0		19.38		0
				36	22		19.39		0
				36	43		19.23		0
				75	0		19.31		0
			QPSK	1	1		19.27		0
				1	40		19.22		0
				1	77		19.13		0
				36	0		19.37		0
				36	22		19.31		0
				36	43		19.28		0
				75	0		19.34		0
			16QAM	1	1		19.36		0
			64QAM	1	1		19.31		0
			256QAM	1	1		18.25		0.5
		CP	QPSK	1	1		19.48		0

[NR FDD Band n70 Conducted Power_Antenna F_TX Hopping_ DSI = 0]

NR FDD Band n70 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							340500		
							1702.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		20.22		0
				1	40		20.16		0
				1	77		20.03		0
				36	0		20.13		0
				36	22		20.23		0
				36	43		20.07		0
				75	0		20.15		0
			QPSK	1	1		20.13		0
				1	40		20.12		0
				1	77		20.02		0
				36	0		20.11		0
				36	22		20.15		0
				36	43		20.10		0
				75	0		20.16		0
			16QAM	1	1		20.12		0
			64QAM	1	1		20.25		0
			256QAM	1	1		18.26		1.5
		CP	QPSK	1	1		20.30		0

[NR TDD Band n77 Conducted Power_ Antenna F_ DSI = 0 _Power Class 2 Only]

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						650000				662000		
						3750 ㎒				3930 ㎒		
100 ㎒	30	DFT-s OFDM	pi/2 BPSK	1	1	17.36				17.18		0
				1	137	17.26				17.31		0
				1	271	17.54				17.34		0
				135	0	17.27				17.35		0
				135	69	17.33				17.28		0
				135	138	17.20				17.21		0
				270	0	17.57				17.58		0
			QPSK	1	1	17.75				17.22		0
				1	137	17.13				17.37		0
				1	271	17.69				17.44		0
				135	0	17.45				16.89		0
				135	69	17.38				17.24		0
				135	138	17.18				17.33		0
				270	0	17.42				17.32		0
			16QAM	1	1	17.25				17.02		0
			64QAM	1	1	17.15				17.08		0
			256QAM	1	1	16.74				16.44		0
		CP	QPSK	1	1	17.08				16.85		0

[NR TDD Band n77 DoD Conducted Power_ Antenna F_ DSI = 0_Power Class 2 Only]

NR TDD Band n77 DoD _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		17.74		0
				1	137		17.65		0
				1	271		17.73		0
				135	0		17.80		0
				135	69		17.81		0
				135	138		17.75		0
				270	0		17.97		0
			QPSK	1	1		17.63		0
				1	137		17.53		0
				1	271		17.88		0
				135	0		17.66		0
				135	69		17.75		0
				135	138		17.75		0
				270	0		17.70		0
			16QAM	1	1		17.51		0
			64QAM	1	1		17.40		0
			256QAM	1	1		17.20		0
		CP	QPSK	1	1		17.25		0

[NR TDD Band n78 Power Class 2 Only Conducted Power_ Antenna F_ DSI = 0]

NR TDD Band n78 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							650000		
							3750 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		19.32		0
				1	137		19.19		0
				1	271		19.72		0
				135	0		19.25		0
				135	69		19.22		0
				135	138		19.31		0
				270	0		19.36		0
			QPSK	1	1		19.17		0
				1	137		19.07		0
				1	271		19.67		0
				135	0		19.24		0
				135	69		19.15		0
				135	138		19.12		0
				270	0		19.67		0
			16QAM	1	1		19.17		0
			64QAM	1	1		19.21		0
			256QAM	1	1		18.75		0
		CP	QPSK	1	1		19.26		0

[NR TDD Band n78 DoD Power Class 2 Only Conducted Power_Antenna F_ DSI = 0]

NR TDD Band n78 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		19.98		0
				1	137		19.93		0
				1	271		19.88		0
				135	0		19.91		0
				135	69		19.93		0
				135	138		19.91		0
				270	0		19.82		0
			QPSK	1	1		19.98		0
				1	137		19.75		0
				1	271		19.95		0
				135	0		19.89		0
				135	69		19.85		0
				135	138		19.57		0
				270	0		19.76		0
			16QAM	1	1		19.67		0
			64QAM	1	1		18.87		0
			256QAM	1	1		19.32		0
		CP	QPSK	1	1		19.41		0

[NR FDD Band n2 Conducted Power _ Antenna F (TX Hopping) _ DSI = 1]

NR FDD Band n2 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376000		
							1880 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		18.05		0
				1	108		18.10		0
				1	214		17.87		0
				108	0		18.08		0
				108	54		17.95		0
				108	108		18.04		0
				216	0		18.12		0
			QPSK	1	1		18.06		0
				1	108		17.92		0
				1	214		18.02		0
				108	0		18.11		0
				108	54		18.10		0
				108	108		18.17		0
				216	0		17.94		0
			16QAM	1	1		17.75		0
			64QAM	1	1		17.97		0
			256QAM	1	1		17.37		0
		CP	QPSK	1	1		18.22		0

[NR FDD Band n5 Conducted Power_ Antenna E_ DSI = 1]

NR FDD Band n5_ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							167300		
							836.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		21.54		0
				1	53		21.43		0
				1	104		21.26		0
				50	0		21.38		0
				50	28		21.37		0
				50	56		21.20		0
				100	0		21.40		0
			QPSK	1	1		21.50		0
				1	53		21.39		0
				1	104		21.28		0
				50	0		21.33		0
				50	28		21.31		0
				50	56		21.18		0
				100	0		21.36		0
			16QAM	1	1		21.29		0
			64QAM	1	1		21.40		0
			256QAM	1	1		19.44		1.5
		CP	QPSK	1	1		21.56		0

[NR FDD Band n7 Conducted Power_ Antenna F_TX Hopping_ DSI = 1]

NR FDD Band n7 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							507000		
							2535 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		15.78		0
				1	108		15.75		0
				1	214		15.80		0
				108	0		15.78		0
				108	54		15.91		0
				108	108		15.85		0
				216	0		15.80		0
			QPSK	1	1		15.72		0
				1	108		15.65		0
				1	214		15.78		0
				108	0		15.82		0
				108	54		15.67		0
				108	108		15.78		0
				216	0		15.87		0
			16QAM	1	1		15.74		0
			64QAM	1	1		15.94		0
			256QAM	1	1		15.35		0
		CP	QPSK	1	1		15.93		0

[NR FDD Band n12 Conducted Power_Antenna E_ ASDIV_ DSI = 1]

NR FDD Band n12_ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							141500		
							707.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		21.08		0
				1	40		21.03		0
				1	77		20.98		0
				36	0		21.08		0
				36	22		21.04		0
				36	43		21.05		0
				75	0		20.97		0
			QPSK	1	1		21.06		0
				1	40		21.01		0
				1	77		20.96		0
				36	0		21.05		0
				36	22		21.00		0
				36	43		21.06		0
				75	0		20.94		0
			16QAM	1	1		20.98		0
			64QAM	1	1		20.91		0
			256QAM	1	1		19.19		1.5
		CP	QPSK	1	1		21.32		0

[NR FDD Band n25 Conducted Power_ Antenna F_TX Hopping _ DSI = 1]

NR FDD Band n25 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							376500		
							1882.5 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		18.14		0
				1	108		18.17		0
				1	214		18.13		0
				108	0		18.19		0
				108	54		18.28		0
				108	108		18.56		0
				216	0		18.38		0
			QPSK	1	1		18.27		0
				1	108		18.32		0
				1	214		18.23		0
				108	0		18.47		0
				108	54		18.39		0
				108	108		18.48		0
				216	0		18.24		0
			16QAM	1	1		18.28		0
			64QAM	1	1		17.89		0
			256QAM	1	1		18.28		0
		CP	QPSK	1	1		18.41		0

[NR FDD Band n26 Conducted Power_ Antenna E_DSI = 1]

NR FDD Band n26 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							166300		
							831.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		21.14		0
				1	53		21.11		0
				1	104		20.92		0
				50	0		21.06		0
				50	28		21.05		0
				50	56		20.92		0
				100	0		21.09		0
			QPSK	1	1		21.12		0
				1	53		21.05		0
				1	104		20.92		0
				50	0		21.03		0
				50	28		21.01		0
				50	56		20.89		0
				100	0		21.08		0
			16QAM	1	1		20.86		0
			64QAM	1	1		21.02		0
			256QAM	1	1		19.16		1.5
		CP	QPSK	1	1		21.22		0

[NR FDD Band n30 Conducted Power_Antenna F_ DSI = 1]

NR FDD Band n30_ 10 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							462000		
							2310 ㎒		
10 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		17.15		0
				1	26		17.15		0
				1	50		17.07		0
				25	0		17.05		0
				25	14		17.20		0
				25	27		17.02		0
				50	0		17.09		0
			QPSK	1	1		17.04		0
				1	26		16.97		0
				1	50		16.97		0
				25	0		16.95		0
				25	14		17.00		0
				25	27		17.06		0
				50	0		16.92		0
			16QAM	1	1		17.02		0
			64QAM	1	1		17.12		0
			256QAM	1	1		16.47		0
		CP	QPSK	1	1		17.33		0

[NR TDD Band n38 Conducted Power_ Power Class 3 Only_Antenna F_DSI = 1]

NR TDD Band n38 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							519000		
							2595 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		17.44		0
				1	80		17.42		0
				1	158		17.37		0
				80	0		17.57		0
				80	40		17.58		0
				80	80		17.49		0
				160	0		17.52		0
			QPSK	1	1		17.40		0
				1	80		17.43		0
				1	158		17.36		0
				80	0		17.67		0
				80	40		17.52		0
				80	80		17.52		0
				160	0		17.58		0
			16QAM	1	1		17.43		0
			64QAM	1	1		17.49		0
			256QAM	1	1		16.97		0
		CP	QPSK	1	80		17.65		0

[NR TDD Band n41 Conducted Power_ Antenna F_ DSI = 1 (Power Class 2 Only)]

NR TDD Band n41 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)					MPR [dB]
								518598			
								2592.99 ㎒			
100 ㎒	30	DFT-s	pi/2 BPSK	1	1			17.88			0
				1	137			17.66			0
				1	271			17.89			0
				135	0			17.68			0
				135	69			17.66			0
				135	138			17.85			0
				270	0			17.86			0
			QPSK	1	1			17.97			0
				1	137			17.62			0
				1	271			17.90			0
				135	0			17.80			0
				135	69			17.65			0
				135	138			17.85			0
				270	0			17.85			0
			16QAM	1	1			17.93			0
			64QAM	1	1			17.98			0
			256QAM	1	1			17.50			0
		CP	QPSK	1	1			17.87			0

[NR TDD Band n41 Conducted Power_Power Class 2 Only_ Antenna B_ TX Hopping_ DSI = 1]

NR TDD Band n41 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)					MPR [dB]
								518598			
								2592.99 ㎒			
100 ㎒	30	DFT-s	pi/2 BPSK	1	1			24.79			0
				1	137			24.53			0
				1	271			24.65			0
				135	0			24.66			0
				135	69			24.52			0
				135	138			24.51			0
				270	0			24.61			0
			QPSK	1	1			24.93			0
				1	137			24.39			0
				1	271			24.49			0
				135	0			24.69			0
				135	69			24.43			0
				135	138			24.52			0
				270	0			24.58			0
			16QAM	1	1			24.76			0
			64QAM	1	1			23.76			0.5
			256QAM	1	1			21.51			2.5
		CP	QPSK	1	1			24.79			0

[NR TDD Band n48 Conducted Power_Power Class 3 Only_Antenna F_ DSI = 1]

NR TDD Band n48 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]				MPR [dB]
						638000	641666		645334	
						3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	DFT-s OFDM	pi/2 BPSK	1	1	16.09	16.58		16.56	0
				1	53	16.05	16.51		16.67	0
				1	104	16.22	16.35		16.89	0
				50	0	16.16	16.66		16.68	0
				50	28	16.21	16.61		16.84	0
				50	56	16.26	16.48		16.82	0
				100	0	16.17	16.51		16.71	0
			QPSK	1	1	16.06	16.53		16.50	0
				1	53	15.99	16.43		16.58	0
				1	104	16.21	16.25		16.80	0
				50	0	16.15	16.64		16.62	0
				50	28	16.17	16.58		16.75	0
				50	56	16.15	16.48		16.85	0
				100	0	16.15	16.51		16.74	0
			16QAM	1	1	15.87	16.53		16.51	0
			64QAM	1	1	16.07	16.59		16.53	0
			256QAM	1	1	15.75	16.18		16.15	0
		CP	QPSK	1	1	16.33	16.59		16.60	0

[NR FDD Band n66 Conducted Power _ Antenna F_TX Hopping_DSI = 1]

NR FDD Band n66 _ 40 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 ㎒		
40 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		17.31		0
				1	108		17.36		0
				1	214		17.32		0
				108	0		17.42		0
				108	54		17.49		0
				108	108		17.30		0
				216	0		17.40		0
			QPSK	1	1		17.30		0
				1	108		17.37		0
				1	214		17.55		0
				108	0		17.43		0
				108	54		17.27		0
				108	108		17.19		0
				216	0		17.34		0
			16QAM	1	1		17.38		0
			64QAM	1	1		17.52		0
			256QAM	1	1		16.65		0
		CP	QPSK	1	1		17.19		0

[NR FDD Band n70 Conducted Power_Antenna F_TX Hopping_ DSI = 1]

NR FDD Band n70 _ 15 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							340500		
							1702.5 ㎒		
15 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		17.96		0
				1	40		17.61		0
				1	77		17.69		0
				36	0		17.88		0
				36	22		17.79		0
				36	43		17.73		0
				75	0		17.80		0
			QPSK	1	1		17.84		0
				1	40		17.67		0
				1	77		17.63		0
				36	0		17.89		0
				36	22		17.72		0
				36	43		17.75		0
				75	0		17.87		0
			16QAM	1	1		17.67		0
			64QAM	1	1		17.88		0
			256QAM	1	1		17.10		0
		CP	QPSK	1	1		17.94		0

[NR FDD Band n71 Conducted Power_Antenna E_ASDIV_ DSI = 1]

NR FDD Band n71 _ 20 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							136100		
							680.5 ㎒		
20 ㎒	15	DFT-s OFDM	pi/2 BPSK	1	1		21.64		0
				1	53		21.58		0
				1	104		21.47		0
				50	0		21.51		0
				50	28		21.60		0
				50	56		21.44		0
				100	0		21.57		0
			QPSK	1	1		21.59		0
				1	53		21.61		0
				1	104		21.36		0
				50	0		21.50		0
				50	28		21.49		0
				50	56		21.37		0
				100	0		21.55		0
			16QAM	1	1		21.39		0
			64QAM	1	1		21.62		0
			256QAM	1	1		19.94		1.5
		CP	QPSK	1	1		21.65		0

[NR TDD Band n77 Conducted Power_ Antenna F_ DSI = 1 _Power Class 2 Only]

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						650000				662000		
						3750 ㎒				3930 ㎒		
100 ㎒	30	DFT-s OFDM	pi/2 BPSK	1	1	16.51				16.38		0
				1	137	16.44				16.45		0
				1	271	16.93				16.94		0
				135	0	16.40				16.41		0
				135	69	16.51				16.55		0
				135	138	16.77				16.86		0
				270	0	16.55				16.65		0
			QPSK	1	1	16.83				16.75		0
				1	137	16.38				16.39		0
				1	271	16.35				16.36		0
				135	0	16.77				16.43		0
				135	69	16.52				16.32		0
				135	138	16.62				16.44		0
				270	0	16.60				16.56		0
			16QAM	1	1	16.33				16.06		0
			64QAM	1	1	16.44				16.30		0
			256QAM	1	1	16.05				15.89		0
		CP	QPSK	1	1	16.22				16.02		0

[NR TDD Band n77 DoD Conducted Power_ Antenna F_ DSI = 1_Power Class 2 Only]

NR TDD Band n77 DoD _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		16.95		0
				1	137		16.86		0
				1	271		16.93		0
				135	0		16.98		0
				135	69		16.96		0
				135	138		16.98		0
				270	0		16.97		0
			QPSK	1	1		16.96		0
				1	137		16.75		0
				1	271		16.91		0
				135	0		16.95		0
				135	69		16.94		0
				135	138		16.92		0
				270	0		16.93		0
			16QAM	1	1		16.87		0
			64QAM	1	1		16.94		0
			256QAM	1	1		16.50		0
		CP	QPSK	1	1		16.91		0

[NR TDD Band n78 Conducted Power_ Antenna F_ DSI = 1 _Power Class 2 Only]

NR TDD Band n78 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							650000		
							3750 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		15.70		0
				1	137		15.33		0
				1	271		15.46		0
				135	0		15.48		0
				135	69		15.37		0
				135	138		15.31		0
				270	0		15.38		0
			QPSK	1	1		15.40		0
				1	137		15.37		0
				1	271		15.64		0
				135	0		15.37		0
				135	69		15.40		0
				135	138		15.44		0
				270	0		15.48		0
			16QAM	1	1		15.44		0
			64QAM	1	1		15.57		0
			256QAM	1	1		15.22		0
		CP	QPSK	1	1		15.71		0

[NR TDD Band n78 DoD Conducted Power_ Antenna F_ DSI = 1 _Power Class 2 Only]

NR TDD Band n78 _100 ㎒ Bandwidth Conducted Power

Bandwidth	SCS(㎑)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 ㎒		
100 ㎒	30	DFT-s	pi/2 BPSK	1	1		16.88		0
				1	137		16.81		0
				1	271		16.92		0
				135	0		16.94		0
				135	69		16.93		0
				135	138		16.95		0
				270	0		16.93		0
			QPSK	1	1		16.84		0
				1	137		16.76		0
				1	271		16.97		0
				135	0		16.93		0
				135	69		16.89		0
				135	138		16.94		0
				270	0		16.92		0
			16QAM	1	1		16.65		0
			64QAM	1	1		16.79		0
			256QAM	1	1		16.36		0
		CP	QPSK	1	1		16.88		0

11.4.3 NR Band SRS Conducted Power
[NR TDD Band n41 SRS Conducted Power]
Pmax

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN2(Ant B), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		22.43		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1(Ant E), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		20.92		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		19.42		0

DSI = 0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN2(Ant B), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		20.98		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1(Ant E), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		16.75		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		19.42		0

DSI = 1

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN2(Ant B), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		22.51		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1(Ant E), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		17.20		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		17.10		0

[NR TDD Band n41 SRS Conducted Power_ TX Hopping]

Pmax

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub2(Ant F), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		21.56		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		21.05		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1 (Ant E), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		17.92		0

DSI = 0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub2(Ant F), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		19.70		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		19.25		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1 (Ant E), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		12.64		0

DSI = 1

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub2(Ant F), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		16.85		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		19.47		0

NR TDD Band n41_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub1 (Ant E), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				518598		
				2592.99 ㎒		
100 ㎒	30	CW		13.11		0

[NR TDD Band n48 SRS Conducted Power]

Pmax

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	19.85	20.25		22.09	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	20.99	20.72		20.44	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	17.53	18.31		19.21	0

DSI = 0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	16.59	16.69		16.34	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	17.45	17.24		16.93	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	15.81	15.57		15.57	0

DSI = 1

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	14.44	14.48		14.39	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	14.49	14.24		14.07	0

NR TDD Band n48_ 40 ㎒ Bandwidth Conducted Power_ Antenna: Main4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]				MPR [dB]
			638000	641666		645334	
			3570 ㎒	3624.99 ㎒		3680.01 ㎒	
40 ㎒	30	CW	13.72	13.57		13.55	0

[NR TDD Band n77 SRS Conducted Power]

Pmax

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	21.01				21.48		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	23.83				23.92		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	20.13				19.28		0

DSI = 0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	16.88				16.84		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	17.06				16.99		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	17.23				16.82		0

DSI = 1

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	14.84				14.79		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	13.48				13.42		0

NR TDD Band n77_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]						MPR [dB]
			650000				662000		
			3750 ㎒				3930 ㎒		
100 ㎒	30	CW	15.10				14.89		0

[NR TDD Band n77 DoD SRS Conducted Power]

Pmax

NR TDD Band n77 DoD_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		20.46		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		23.71		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		18.72		0

DSI = 0

NR TDD Band n77 DoD_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		17.48		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		16.51		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		16.52		0

DSI = 1

NR TDD Band n77 DoD_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		15.44		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		13.47		0

NR TDD Band n77 DoD _ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		15.48		0

[NR TDD Band n78 SRS Conducted Power]

Pmax

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	20.11	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	23.29	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	18.83	0

DSI = 0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	16.19	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	16.82	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	16.75	0

DSI = 1

R TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	14.17	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	13.49	0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm] 650000 3750 ㎒	MPR [dB]
100 ㎒	30	CW	14.83	0

[NR TDD Band n78 DoD SRS Conducted Power]

Pmax

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		20.85		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		23.44		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		19.31		0

DSI = 0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		16.96		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		16.40		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		16.66		0

DSI = 1

R TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN3(Ant C), SRS1

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		14.74		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: Sub5(Ant I), SRS2

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		13.49		0

NR TDD Band n78_ 100 ㎒ Bandwidth Conducted Power_ Antenna: MAIN4(Ant D), SRS3

Bandwidth	SCS(㎑)	Modulation	Max. Average Power [dBm]			MPR [dB]
				633334		
				3500.01 ㎒		
100 ㎒	30	CW		15.47		0

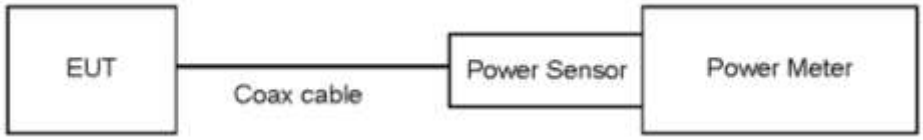
11.5 WIFI Conducted Power measurement method

Un-Licensed Bands (DTS Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 558074 v05 - Section 8.3.2.3 - ANSI 63.10-2013 - Section 11.9.2.3

Test Procedure
1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup

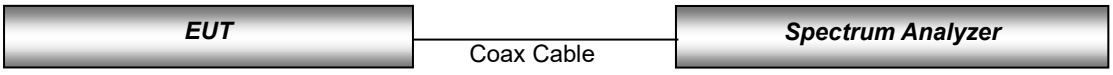


Un-Licensed Bands(NII Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 789033 D02 v02r01 - Section E.3.a

Test Procedure
1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



11.5.1 IEEE 802.11 (2.4 GHz) Maximum Conducted Power(Pmax, DSI=0, Body SAR)

Mode	Frequency [㎒]	Channel	IEEE 802.11 (2.4 ㎓) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	19.01	18.53	21.79
	2 437	6	18.70	18.59	21.66
	2 462	11	18.53	18.10	21.33
802.11g	2 412	1	16.87	16.43	19.66
	2 437	6	16.35	16.55	19.46
	2 462	11	17.13	16.51	19.84
802.11n (HT20)	2 412	1	16.79	16.40	19.61
	2 437	6	16.34	16.50	19.43
	2 462	11	17.08	16.47	19.80
802.11ax (HT20)	2 412	1	16.82	16.32	19.59
	2 437	6	16.36	16.38	19.38
	2 462	11	16.35	15.79	19.09

11.5.2 IEEE 802.11 (2.4 GHz) Reduced Conducted Power (DSI =1, Head SAR)

Mode	Frequency [㎒]	Channel	IEEE 802.11 (2.4 ㎓) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	13.51	13.37	16.45
	2 437	6	13.19	13.26	16.24
	2 462	11	13.76	13.54	16.67
802.11g	2 412	1	13.26	13.08	16.18
	2 437	6	13.04	12.88	15.97
	2 462	11	13.62	13.22	16.43
802.11n (HT20)	2 412	1	12.89	13.06	15.98
	2 437	6	12.64	12.85	15.75
	2 462	11	13.29	13.19	16.25
802.11ax (HT20)	2 412	1	12.60	12.74	15.68
	2 437	6	12.32	12.55	15.44
	2 462	11	12.95	12.89	15.93

11.5.3 IEEE 802.11 (5 GHz) Plimit Conducted Power (DSI =0,Body SAR)

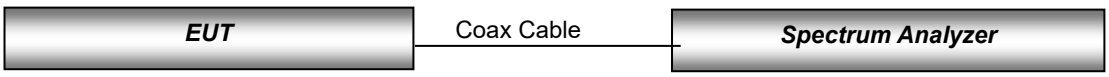
Mode	Frequency [㎒]	Channel	IEEE 802.11 (5 ㎓) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11n (40 ㎒ BW)	5 210	38	15.90	14.68	18.34
	5 230	46	15.93	14.65	18.35
	5 270	54	15.97	14.84	18.45
	5 310	62	15.46	14.09	17.84
	5 510	102	15.93	15.06	18.53
	5 590	118	15.84	15.08	18.49
	5 630	126	15.74	14.98	18.39
	5 710	142	15.99	15.04	18.55
	5 755	151	15.94	15.44	18.71
	5 795	159	15.92	15.48	18.72
	5 835	167	15.78	15.30	18.56
	5 875	175	15.66	15.02	18.36

IEEE 802.11 (5 GHz) Reduced Conducted Power (DSI =1, Head SAR)

Mode	Frequency [㎒]	Channel	IEEE 802.11 (5 ㎓) Average Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11ac (80 ㎒ BW)	5 210	42	12.95	11.10	15.13
	5 290	58	12.97	11.03	15.12
	5 530	106	12.88	12.50	15.70
	5 610	122	12.86	12.85	15.86
	5 690	138	12.91	12.73	15.83
	5 775	155	12.99	12.80	15.91
	5 855	171	12.95	12.27	15.63
802.11ac (160 ㎒ BW)	5 250	50	12.65	10.98	14.90
	5 570	114	12.09	12.54	15.33
	5 815	163	12.18	12.10	15.15

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:
▪ Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
▪ For transmission mode with the same maximum output power specification, powers were measured for the largest channel Bandwidth, lowest order modulation and lowest data rate.
▪ For transmission modes with identical maximum specified output power, channel Bandwidth, modulation and data rates, power measurements were required for all identical configurations.
▪ For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-Band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-Band channels, due to an even number of channels, both channels were measured.

Test Configuration



11.6 Bluetooth Maximum Conducted Power

The Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]	
		Ant.1	Ant.2
DH5	0	16.91	18.40
	39	18.46	19.44
	78	16.41	18.35
2-DH5	0	12.19	13.67
	39	13.95	14.74
	78	12.41	13.83
3-DH5	0	12.17	13.65
	39	13.90	14.72
	78	12.40	13.85

BT LE Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]	
		Ant.1	Ant.2
		Measured Power[dBm]	Measured Power[dBm]
LE 1M 37 Pakcet	0	16.86	18.41
	19	18.73	19.48
	39	17.26	18.76
LE 1M 255 Pakcet	0	16.66	18.24
	19	18.46	19.20
	39	16.79	18.31
LE 2M 37 Pakcet	0	17.04	18.49
	19	18.92	19.61
	39	17.52	18.92
LE 2M 255 Pakcet	0	16.74	18.22
	19	18.75	19.28
	39	16.94	18.41
LE 125K 37 Pakcet	0	8.95	11.04
	19	9.15	11.43
	39	8.46	8.02
LE 125K 255 Pakcet	0	8.96	10.97
	19	9.14	11.28
	39	8.50	8.04
LE 500K 37 Pakcet	0	9.01	10.99
	19	9.25	11.48
	39	8.58	8.09
LE 500K 255 Pakcet	0	8.93	10.97
	19	9.17	11.38
	39	8.46	7.96

Per October 2016 TCB Workshop Notes:
When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.
Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth.

Bluetooth DH 5

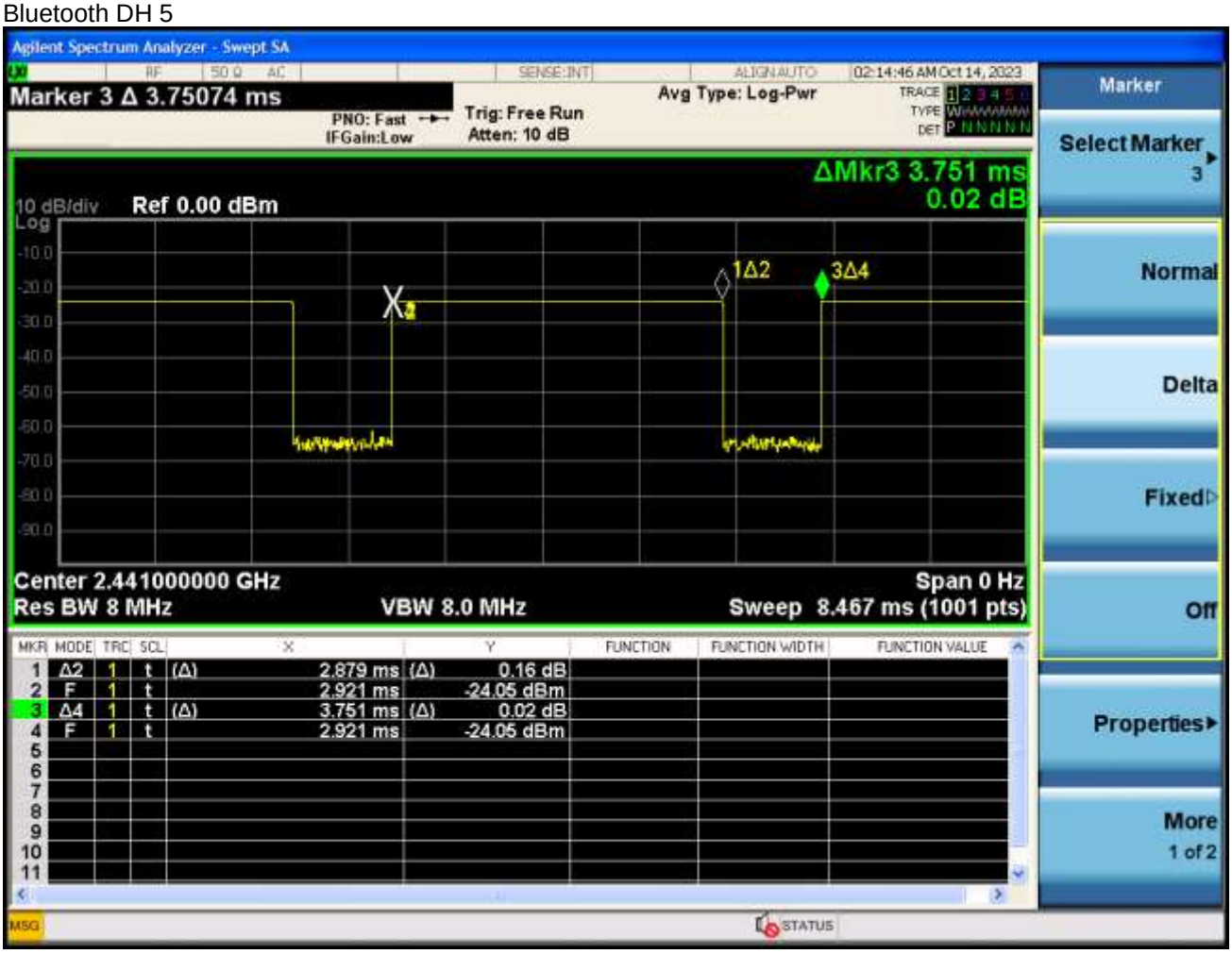
Ant.1 Duty Cycle

= (BT-On time /BT-Full time) =(2.870/3.742) = 0.767 (DH5)

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 79% In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results. The duty cycle of DH5 measured by DUT was 76.7%, and the duty cycle was compensated by applying test error tolerance 1%.For more information on BT, please refer to the technical description document.

Bluetooth DH 5



Ant.2 Duty Cycle

= (BT-On time /BT-Full time) =(2.879/3.751) = 0.768 (DH5)

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 79% In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results. The duty cycle of DH5 measured by DUT was 76.8%, and the duty cycle was compensated by applying test error tolerance 1%.For more information on BT, please refer to the technical description document.

12. System Verification

12.1 Tissue Verification

The body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/11/2023	21.1	750H	705	0.886	44.089	0.889	42.174	- 0.34	+ 4.54
			710	0.889	44.013	0.890	42.148	- 0.11	+ 4.42
			750	0.910	43.410	0.893	41.940	+ 1.90	+ 3.51
09/18/2023	21.4	750H	705	0.859	42.563	0.889	42.174	- 3.37	+ 0.92
			710	0.864	42.460	0.890	42.148	- 2.92	+ 0.74
			750	0.904	41.868	0.893	41.940	+ 1.23	- 0.17
09/12/2023	21.4	750H	750	0.915	42.938	0.893	41.940	+ 2.46	+ 2.38
			785	0.923	42.433	0.896	41.758	+ 3.01	+ 1.62
09/19/2023	21.3	750H	750	0.901	41.852	0.893	41.940	+ 0.90	- 0.21
			785	0.937	41.295	0.896	41.758	+ 4.58	- 1.11
09/13/2023	21.1	750H	750	0.922	43.271	0.893	41.940	+ 3.25	+ 3.17
			785	0.925	42.765	0.896	41.758	+ 3.24	+ 2.41
09/20/2023	21.5	750H	750	0.890	41.964	0.893	41.940	- 0.34	+ 0.06
			785	0.926	41.384	0.896	41.758	+ 3.35	- 0.90
09/15/2023	22.0	750H	705	0.917	43.150	0.889	42.174	+ 3.15	+ 2.31
			710	0.918	43.100	0.890	42.148	+ 3.15	+ 2.26
			750	0.931	42.980	0.893	41.940	+ 4.26	+ 2.48
09/21/2023	22.3	750H	705	0.922	42.442	0.889	42.174	+ 3.71	+ 0.64
			710	0.923	42.392	0.890	42.148	+ 3.71	+ 0.58
			750	0.936	42.272	0.893	41.940	+ 4.82	+ 0.79
09/12/2023	20.7	835H	820	0.887	42.442	0.899	41.577	- 1.22	+ 2.08
			835	0.905	42.212	0.900	41.500	+ 0.56	+ 1.72
			850	0.921	41.984	0.916	41.500	+ 0.55	+ 1.17
09/18/2023	21.0	835H	820	0.887	41.434	0.899	41.577	- 1.22	- 0.34
			835	0.904	41.209	0.900	41.500	+ 0.44	- 0.70
			850	0.919	40.983	0.916	41.500	+ 0.44	- 1.25
09/13/2023	21.0	835H	820	0.882	42.426	0.899	41.577	- 1.78	+ 2.04
			835	0.900	42.194	0.900	41.500	+ 0.00	+ 1.67
			850	0.914	41.963	0.916	41.500	+ 0.00	+ 1.12
09/14/2023	21.4	835H	820	0.887	41.432	0.899	41.577	- 1.22	- 0.35
			835	0.904	41.197	0.900	41.500	+ 0.44	- 0.73
			850	0.919	40.972	0.916	41.500	+ 0.44	- 1.27
09/14/2023	21.6	835H	820	0.927	42.601	0.899	41.577	+ 3.11	+ 2.46
			835	0.911	42.395	0.900	41.500	+ 1.22	+ 2.16
			850	0.926	42.193	0.916	41.500	+ 1.09	+ 1.67
09/25/2023	22.1	835H	820	0.912	43.004	0.899	41.577	+ 1.45	+ 3.43
			835	0.919	43.015	0.900	41.500	+ 2.11	+ 3.65
			850	0.927	42.886	0.916	41.500	+ 1.20	+ 3.34
09/16/2023	21.4	1800H	1710	1.301	39.771	1.348	40.144	- 3.34	- 0.93
			1750	1.345	39.625	1.371	40.080	- 1.75	- 1.14
			1800	1.400	39.390	1.400	40.000	+ 0.00	- 1.53

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/11/2023	22.3	1800H	1710	1.290	39.775	1.348	40.144	- 4.30	- 0.92
			1750	1.332	39.627	1.371	40.080	- 2.84	- 1.13
			1800	1.385	39.391	1.400	40.000	- 1.07	- 1.52
09/19/2023	21.2	1800H	1710	1.292	39.860	1.348	40.144	- 4.15	- 0.71
			1750	1.339	39.696	1.371	40.080	- 2.33	- 0.96
			1800	1.387	39.396	1.400	40.000	- 0.93	- 1.51
09/15/2023	21.1	1900H	1850	1.362	41.518	1.400	40.000	-2.71	+ 3.79
			1900	1.414	41.329	1.400	40.000	+ 1.00	+ 3.32
			1910	1.421	41.298	1.400	40.000	+ 1.50	+ 3.25
09/14/2023	21.2	1900H	1850	1.364	41.521	1.400	40.000	- 2.57	+ 3.80
			1900	1.414	41.330	1.400	40.000	+ 1.00	+ 3.33
			1910	1.421	41.298	1.400	40.000	+ 1.50	+ 3.25
09/12/2023	21.8	1900H	1850	1.372	40.178	1.400	40.000	- 2.00	+ 0.44
			1900	1.421	39.974	1.400	40.000	+ 1.50	- 0.06
			1910	1.431	39.933	1.400	40.000	+ 2.21	- 0.17
09/19/2023	21.2	1900H	1850	1.394	40.420	1.400	40.000	- 0.43	+ 1.05
			1900	1.436	40.234	1.400	40.000	+ 2.57	+ 0.59
			1910	1.455	40.116	1.400	40.000	+ 3.93	+ 0.29
09/15/2023	21.4	2300H	2300	1.720	39.284	1.667	39.470	+ 3.18	- 0.47
			2310	1.728	39.246	1.676	39.452	+ 3.10	- 0.52
09/16/2023	21.4	2300H	2300	1.720	39.282	1.667	39.470	+ 3.18	- 0.48
			2310	1.728	39.245	1.676	39.452	+ 3.10	- 0.52
09/22/2023	21.4	2450H	2400	1.804	38.280	1.756	39.290	+ 2.73	- 2.57
			2450	1.865	38.091	1.800	39.200	+ 3.61	- 2.83
			2500	1.922	37.916	1.855	39.140	+ 3.61	- 3.13
10/13/2023	23.7	2450H	2400	1.743	39.177	1.756	39.290	- 0.74	- 0.29
			2450	1.802	38.974	1.800	39.200	+ 0.11	- 0.58
			2500	1.855	38.809	1.855	39.140	+ 0.00	- 0.85
10/13/2023	22.7	2450H	2400	1.787	37.912	1.756	39.290	+ 1.77	- 3.51
			2450	1.848	37.706	1.800	39.200	+ 2.67	- 3.81
			2500	1.904	37.529	1.855	39.140	+ 2.64	- 4.12
09/11/2023	20.0	2600H	2500	1.849	38.460	1.866	39.126	- 0.91	- 1.70
			2600	1.960	38.100	1.964	39.010	- 0.20	- 2.33
			2690	2.063	37.720	2.062	38.894	+ 0.05	- 3.02
09/18/2023	21.5	2600H	2500	1.919	37.962	1.866	39.126	+ 2.84	- 2.98
			2600	2.032	37.568	1.964	39.010	+ 3.46	- 3.70
			2690	2.136	37.216	2.062	38.894	+ 3.59	- 4.31
09/19/2023	21.4	2600H	2500	1.874	39.772	1.866	39.126	+ 0.43	+ 1.65
			2600	1.955	39.737	1.964	39.010	- 0.46	+ 1.86
			2690	2.029	39.556	2.062	38.894	- 1.60	+ 1.70
10/27/2023	20.4	2600H	2500	1.874	39.773	1.866	39.126	+ 0.43	+ 1.65
			2600	1.955	39.738	1.964	39.010	- 0.46	+ 1.87
			2690	2.029	39.557	2.062	38.894	- 1.60	+ 1.70
10/29/2023	20.4	2600H	2500	1.874	39.775	1.866	39.126	+ 0.43	+ 1.66
			2600	1.955	39.739	1.964	39.010	- 0.46	+ 1.87
			2690	2.029	39.557	2.062	38.894	- 1.60	+ 1.70

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/12/2023	21.0	2600H	2500	1.849	38.460	1.866	39.126	- 0.91	- 1.70
			2600	1.960	38.100	1.964	39.010	- 0.20	- 2.33
			2690	2.062	37.690	2.062	38.894	+ 0.00	- 3.10
09/19/2023	22.0	2600H	2500	1.919	38.056	1.866	39.126	+ 2.84	- 2.73
			2600	2.031	37.661	1.964	39.010	+ 3.41	- 3.46
			2690	2.137	37.313	2.062	38.894	+ 3.64	- 4.06
09/16/2023	21.8	3500H-3700H	3500	2.972	39.424	2.913	37.930	+ 2.03	+ 3.94
			3550	3.016	39.340	2.964	37.870	+ 1.75	+ 3.88
			3650	3.111	39.236	3.066	37.760	+ 1.47	+ 3.91
			3700	3.158	39.199	3.118	37.770	+ 1.28	+ 3.78
09/21/2023	21.2	5180H-5320H	5180	4.534	36.679	4.635	36.010	- 2.18	+ 1.86
			5250	4.662	36.469	4.706	35.930	- 0.93	+ 1.50
			5280	4.697	36.454	4.737	35.894	- 0.84	+ 1.56
			5320	4.745	36.462	4.778	35.846	- 0.69	+ 1.72
09/22/2023	20.4	5500H-5600H	5500	4.924	36.426	4.963	35.640	- 0.79	+ 2.21
			5600	5.002	36.183	5.065	35.530	- 1.24	+ 1.84
			5750	5.205	35.987	5.219	35.360	- 0.27	+ 1.77
09/24/2023	21.0	5750H-5825H	5750	5.168	36.019	5.219	35.360	- 0.98	+ 1.86
			5800	5.112	36.025	5.270	35.300	- 3.00	+ 2.05
			5825	5.098	35.978	5.296	35.270	- 3.74	+ 2.01
09/25/2023	22.4	5800H-5885H	5800	5.158	36.016	5.270	35.300	- 2.13	+ 2.03
			5835	5.147	35.936	5.306	35.258	- 3.00	+ 1.92
			5845	5.153	35.904	5.316	35.246	- 3.07	+ 1.87
			5855	5.162	35.867	5.326	35.235	- 3.08	+ 1.79
			5865	5.172	35.826	5.337	35.225	- 3.09	+ 1.71
			5875	5.182	35.783	5.347	35.215	- 3.09	+ 1.61
			5885	5.190	35.739	5.357	35.205	- 3.12	+ 1.52

- 5G NR SUB 6

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/13/2023	20.8	750H	705	0.853	43.082	0.889	42.174	- 4.05	+ 2.15
			710	0.859	43.008	0.890	42.148	- 3.48	+ 2.04
			750	0.901	42.411	0.893	41.940	+ 0.90	+ 1.12
09/21/2023	21.5	750H	705	0.864	42.918	0.889	42.174	- 2.81	+ 1.76
			710	0.869	42.844	0.890	42.148	- 2.36	+ 1.65
			750	0.912	42.247	0.893	41.940	+ 2.13	+ 0.73
09/15/2023	21.3	750H	705	0.858	42.392	0.889	42.174	- 3.49	+ 0.52
			710	0.864	42.316	0.890	42.148	- 2.92	+ 0.40
			750	0.907	41.713	0.893	41.940	+ 1.57	- 0.54
09/20/2023	20.7	750H	705	0.864	42.509	0.889	42.174	- 2.81	+ 0.79
			710	0.869	42.434	0.890	42.148	- 2.36	+ 0.68
			750	0.912	41.835	0.893	41.940	+ 2.13	- 0.25
09/14/2023	21.9	835H	820	0.906	42.555	0.899	41.577	+ 0.78	+ 2.35
			835	0.923	42.321	0.900	41.500	+ 2.56	+ 1.98
			850	0.939	42.094	0.916	41.500	+ 2.51	+ 1.43
09/22/2023	21.5	835H	820	0.906	42.143	0.899	41.577	+ 0.78	+ 1.36
			835	0.922	41.909	0.900	41.500	+ 2.44	+ 0.99
			850	0.939	41.682	0.916	41.500	+ 2.51	+ 0.44
09/14/2023	21.5	1640H	1640	1.248	41.689	1.307	40.255	- 4.51	+ 3.56
			1690	1.323	41.384	1.336	40.176	- 0.97	+ 3.01
			1700	1.337	41.323	1.342	40.160	- 0.37	+ 2.90
09/15/2023	21.2	1640H	1640	1.246	41.687	1.307	40.255	- 4.67	+ 3.56
			1690	1.320	41.322	1.336	40.176	- 1.20	+ 2.85
			1700	1.343	41.235	1.342	40.160	+ 0.07	+ 2.68
09/13/2023	20.8	1800H	1710	1.306	39.598	1.348	40.144	- 3.12	- 1.36
			1750	1.349	39.447	1.371	40.080	- 1.60	- 1.58
			1800	1.403	39.206	1.400	40.000	+ 0.21	- 1.98
10/04/2023	21.8	1800H	1710	1.325	39.590	1.348	40.144	- 1.71	- 1.38
			1750	1.368	39.447	1.371	40.080	- 0.22	- 1.58
			1800	1.422	39.212	1.400	40.000	+ 1.57	- 1.97
09/12/2023	21.6	1900H	1850	1.368	38.788	1.400	40.000	- 2.29	- 3.03
			1900	1.414	38.560	1.400	40.000	+ 1.00	- 3.60
			1910	1.423	38.511	1.400	40.000	+ 1.64	- 3.72
09/16/2023	21.7	1900H	1850	1.361	39.384	1.400	40.000	- 2.79	- 1.54
			1900	1.410	39.176	1.400	40.000	+ 0.71	- 2.06
			1910	1.420	39.132	1.400	40.000	+ 1.43	- 2.17
09/18/2023	21.8	2300H	2300	1.718	39.298	1.667	39.470	+ 3.06	- 0.44
			2310	1.727	39.260	1.676	39.452	+ 3.04	- 0.49
09/19/2023	21.1	2300H	2300	1.719	39.289	1.667	39.470	+ 3.12	- 0.46
			2310	1.727	39.252	1.676	39.452	+ 3.04	- 0.51
09/13/2023	22.0	2 600H	2500	1.890	39.462	1.866	39.126	+ 1.29	+ 0.86
			2600	2.002	39.065	1.964	39.010	+ 1.93	+ 0.14
			2690	2.106	38.722	2.062	38.894	+ 2.13	- 0.44
09/14/2023	21.4	2 600H	2500	1.918	38.463	1.866	39.126	+ 2.79	- 1.69
			2600	2.030	38.068	1.964	39.010	+ 3.36	- 2.41
			2690	2.137	37.713	2.062	38.894	+ 3.64	- 3.04

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/15/2023	21.2	2 600H	2500	1.908	39.752	1.866	39.126	+ 2.25	+ 1.60
			2600	2.018	39.350	1.964	39.010	+ 2.75	+ 0.87
			2690	2.118	38.959	2.062	38.894	+ 2.72	+ 0.17
09/20/20223	21.4	2 600H	2500	1.894	39.445	1.866	39.126	+ 1.50	+ 0.82
			2600	2.003	39.049	1.964	39.010	+ 1.99	+ 0.10
			2690	2.102	38.649	2.062	38.894	+ 1.94	- 0.63
10/13/2023	20.1	2 600H	2500	1.918	39.889	1.866	39.126	+ 2.79	+ 1.95
			2600	2.031	39.491	1.964	39.010	+ 3.41	+ 1.23
			2690	2.135	39.149	2.062	38.894	+ 3.54	+ 0.66
10/13/2023	20.1	2 600H	2500	1.889	39.617	1.866	39.126	+ 1.23	+ 1.25
			2600	2.000	39.215	1.964	39.010	+ 1.83	+ 0.53
			2690	2.103	38.869	2.062	38.894	+ 1.99	- 0.06
10/13/2023	20.0	2 600H	2500	1.876	39.859	1.866	39.126	+ 0.54	+ 1.87
			2600	1.987	39.464	1.964	39.010	+ 1.17	+ 1.16
			2690	2.091	39.114	2.062	38.894	+ 1.41	+ 0.57
10/13/2023	20.0	2 600H	2500	1.863	40.267	1.866	39.126	- 0.16	+ 2.92
			2600	1.973	39.870	1.964	39.010	+ 0.46	+ 2.20
			2690	2.076	39.526	2.062	38.894	+ 0.68	+ 1.62
09/19/2023	21.0	3500H-3700H	3500	2.939	38.777	2.913	37.930	+ 0.89	+ 2.23
			3550	2.981	38.700	2.964	37.870	+ 0.57	+ 2.19
			3650	3.070	38.599	3.066	37.760	+ 0.13	+ 2.22
			3700	3.115	38.553	3.118	37.770	- 0.10	+ 2.07
09/25/2023	21.6	3500H-3700H	3500	2.939	38.782	2.913	37.930	+ 0.89	+ 2.25
			3550	2.981	38.708	2.964	37.870	+ 0.57	+ 2.21
			3650	3.069	38.599	3.066	37.760	+ 0.10	+ 2.22
			3700	3.114	38.556	3.118	37.770	- 0.13	+ 2.08
09/26/2023	21.9	3500H-3700H	3500	2.940	38.780	2.913	37.930	+ 0.93	+ 2.24
			3550	2.982	38.702	2.964	37.870	+ 0.61	+ 2.20
			3650	3.070	38.598	3.066	37.760	+ 0.13	+ 2.22
			3700	3.115	38.546	3.118	37.770	- 0.10	+ 2.05
09/27/2023	21.8	3500H-3700H	3500	2.953	38.617	2.913	37.930	+ 1.37	+ 1.81
			3550	2.997	38.535	2.964	37.870	+ 1.11	+ 1.76
			3650	3.092	38.437	3.066	37.760	+ 0.85	+ 1.79
			3700	3.138	38.395	3.118	37.770	+ 0.64	+ 1.65
10/04/2023	20.3	3500H	3400	2.902	39.127	2.810	38.040	+ 3.27	+ 2.86
			3500	2.972	38.921	2.913	37.930	+ 2.03	+ 2.61
			3550	3.016	38.833	2.964	37.870	+ 1.75	+ 2.54
10/13/2023	22.0	3500H	3400	2.862	38.779	2.810	38.040	+ 1.85	+ 1.94
			3500	2.933	38.582	2.913	37.930	+ 0.69	+ 1.72
			3550	2.975	38.507	2.964	37.870	+ 0.37	+ 1.68
10/11/2023	22.0	3500H	3400	2.903	39.129	2.810	38.040	+ 3.31	+ 2.86
			3500	2.972	38.917	2.913	37.930	+ 2.03	+ 2.60
			3550	3.017	38.834	2.964	37.870	+ 1.79	+ 2.55
10/12/2023	22.3	3500H	3400	2.903	39.133	2.810	38.040	+ 3.31	+ 2.87
			3500	2.974	38.923	2.913	37.930	+ 2.09	+ 2.62
			3550	3.017	38.843	2.964	37.870	+ 1.79	+ 2.57

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
10/15/2023	21.8	3500H	3400	2.903	39.131	2.810	38.040	+ 3.31	+ 2.87
			3500	2.974	38.922	2.913	37.930	+ 2.09	+ 2.62
			3550	3.017	38.841	2.964	37.870	+ 1.79	+ 2.56
10/04/2023	20.3	3700H~3970	3700	3.158	38.697	3.118	37.700	+ 1.28	+ 2.64
			3750	3.198	38.680	3.169	37.640	+ 0.92	+ 2.76
			3800	3.237	38.657	3.220	37.590	+ 0.53	+ 2.84
			3900	3.304	38.486	3.233	37.470	+ 2.20	+ 2.71
			3970	3.366	38.341	3.394	37.390	- 0.82	+ 2.54
10/13/2023	22.0	3700H~3970	3700	3.109	38.359	3.118	37.700	- 0.29	+ 1.75
			3750	3.149	38.336	3.169	37.640	- 0.63	+ 1.85
			3800	3.187	38.305	3.220	37.590	- 1.02	+ 1.90
			3900	3.254	38.146	3.233	37.470	+ 0.65	+ 1.80
			3970	3.314	38.003	3.394	37.390	- 2.36	+ 1.64
10/11/2023	22.0	3700H~3970	3700	3.158	38.695	3.118	37.700	+ 1.28	+ 2.64
			3750	3.198	38.685	3.169	37.640	+ 0.92	+ 2.78
			3800	3.236	38.660	3.220	37.590	+ 0.50	+ 2.85
			3900	3.304	38.48	3.233	37.470	+ 2.20	+ 2.70
			3970	3.366	38.333	3.394	37.390	- 0.82	+ 2.52
10/12/2023	22.3	3700H~3970	3700	3.158	38.700	3.118	37.700	+ 1.28	+ 2.65
			3750	3.198	38.687	3.169	37.640	+ 0.92	+ 2.78
			3800	3.236	38.66	3.220	37.590	+ 0.50	+ 2.85
			3900	3.303	38.481	3.233	37.470	+ 2.17	+ 2.70
			3970	3.366	38.338	3.394	37.390	- 0.82	+ 2.54
10/15/2023	21.8	3700H~3970	3700	3.159	38.702	3.118	37.700	+ 1.31	+ 2.66
			3750	3.199	38.686	3.169	37.640	+ 0.95	+ 2.78
			3800	3.236	38.659	3.220	37.590	+ 0.50	+ 2.84
			3900	3.303	38.483	3.233	37.470	+ 2.17	+ 2.70
			3970	3.366	38.336	3.394	37.390	- 0.82	+ 2.53

- Phablet SAR

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
09/14/2023	21.3	13H	12	0.744	54.270	0.750	55.000	- 0.80	- 1.33
			13	0.724	54.315	0.750	55.000	- 3.47	- 1.25
			14	0.756	54.275	0.750	55.000	+ 0.80	- 1.32
09/21/2023	21.2	5180H-5320H	5180	4.534	36.679	4.635	36.010	- 2.18	+ 1.86
			5250	4.662	36.469	4.706	35.930	- 0.93	+ 1.50
			5280	4.697	36.454	4.737	35.894	- 0.84	+ 1.56
			5320	4.745	36.462	4.778	35.846	- 0.69	+ 1.72
09/22/2023	20.4	5500H-5600H	5500	4.924	36.426	4.963	35.640	- 0.79	+ 2.21
			5600	5.002	36.183	5.065	35.530	- 1.24	+ 1.84
			5750	5.205	35.987	5.219	35.360	- 0.27	+ 1.77
09/25/2023	22.4	5800H-5885H	5750	5.168	36.019	5.219	35.360	- 0.98	+ 1.86
			5800	5.112	36.025	5.270	35.300	- 3.00	+ 2.05
			5825	5.098	35.978	5.296	35.270	- 3.74	+ 2.01
			5800	5.158	36.016	5.270	35.300	- 2.13	+ 2.03
			5835	5.147	35.936	5.306	35.258	- 3.00	+ 1.92
			5845	5.153	35.904	5.316	35.246	- 3.07	+ 1.87
			5855	5.162	35.867	5.326	35.235	- 3.08	+ 1.79

12.2 System Verification

Input Power: 50 mW

Freq.	Date	Probe	Dipole	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[㎒]		(S/N)	(S/N)		[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	09/11/2023	7655	1014	Head	21.2	21.1	8.59	0.399	7.98	- 7.10	± 10
750	09/18/2023	3076		Head	21.5	21.4	8.59	0.436	8.72	+ 1.51	± 10
750	09/12/2023	7655		Head	21.5	21.4	8.59	0.402	8.04	- 6.40	± 10
750	09/19/2023	3076		Head	21.4	21.3	8.59	0.435	8.70	+ 1.28	± 10
750	09/13/2023	7655		Head	21.2	21.1	8.59	0.406	8.12	- 5.47	± 10
750	09/20/2023	3076		Head	21.6	21.5	8.59	0.430	8.60	+ 0.12	± 10
750	09/15/2023	7655		Head	22.1	22.0	8.59	0.409	8.18	- 4.77	± 10
750	09/21/2023	3076		Head	22.4	22.3	8.59	0.453	9.06	+ 5.47	± 10
835	09/12/2023	7654	4d165	Head	20.8	20.7	9.74	0.519	10.38	+ 6.57	± 10
835	09/18/2023	7654		Head	21.1	21.0	9.74	0.520	10.40	+ 6.78	± 10
835	09/13/2023	7654		Head	21.1	21.0	9.74	0.517	10.34	+ 6.16	± 10
835	09/14/2023	7654		Head	21.5	21.4	9.74	0.523	10.46	+ 7.39	± 10
835	09/14/2023	7655		Head	21.7	21.6	9.74	0.487	9.74	+ 0.00	± 10
835	09/25/2023	3076		Head	22.2	22.1	9.74	0.510	10.20	+ 4.72	± 10
1 800	09/16/2023	7309	2d015	Head	21.5	21.4	37.8	1.99	39.80	+ 5.29	± 10
1 800	09/11/2023	3076		Head	22.4	22.3	37.8	1.90	38.00	+ 0.53	± 10
1 800	09/19/2023	3076		Head	21.3	21.2	37.8	1.91	38.20	+ 1.06	± 10
1 900	09/15/2023	7309	5d061	Head	21.2	21.1	38.9	2.09	41.80	+ 7.46	± 10
1 900	09/14/2023	7309		Head	21.3	21.2	38.9	2.10	42.00	+ 7.97	± 10
1 900	09/12/2023	3076		Head	21.9	21.8	38.9	2.10	42.00	+ 7.97	± 10
1 900	09/19/2023	3076		Head	21.3	21.2	38.9	2.06	41.20	+ 5.91	± 10
2 300	09/15/2023	3076	1010	Head	21.5	21.4	48.3	2.31	46.20	- 4.35	± 10
2 300	09/16/2023	3076		Head	21.5	21.4	48.3	2.31	46.20	- 4.35	± 10
2 450	09/22/2023	7654	1049	Head	21.5	21.4	52.7	2.63	52.60	- 0.19	± 10
2 450	10/13/2023	7654		Head	23.8	23.7	52.7	2.50	50.00	- 5.12	± 10
2 450	10/13/2023	3768		Head	22.8	22.7	52.7	2.62	52.40	- 0.57	± 10
2 600	09/11/2023	7622	1106	Head	20.1	20.0	55.6	2.99	55.40	+7.55	± 10
2 600	09/18/2023	7655		Head	21.6	21.5	55.6	2.77	55.40	- 0.36	± 10
2 600	09/19/2023	3076		Head	21.4	21.4	55.6	2.77	55.40	- 0.36	± 10
2 600	09/12/2023	7622		Head	21.1	21.0	55.6	2.99	59.80	+ 7.55	± 10
2 600	09/19/2023	7655		Head	22.1	22.0	55.6	2.77	55.40	- 0.36	± 10
2 600	10/27/2023	3076		Head	20.4	20.4	55.6	2.74	54.80	- 1.44	± 10
2 600	10/29/2023	3076		Head	20.5	20.4	55.6	2.74	54.80	- 1.44	± 10
3 500	09/16/2023	7655	1040	Head	21.9	21.8	66.5	3.38	67.60	+ 1.65	± 10
3 700	09/16/2023	7655	1066	Head	21.9	21.8	67.9	3.47	69.40	+ 2.21	± 10
5 250	09/21/2023	3797	1317	Head	21.3	21.2	78.8	4.13	82.60	+ 4.82	± 10
5 600	09/22/2023	3797		Head	20.5	20.4	81.2	4.12	82.40	+ 1.48	± 10
5 750	09/24/2023	3797		Head	21.1	21.0	77.4	3.81	76.20	- 1.55	± 10
5 800	09/25/2023	3797		Head	22.5	22.4	76.9	3.95	79.00	+ 2.73	± 10

◆ **5G NR SUB 6**

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[㎒]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	09/13/2023	7732	1014	Head	20.9	20.8	8.59	0.424	8.48	- 1.28	± 10
750	09/21/2023	7732		Head	21.6	21.5	8.59	0.428	8.56	- 0.35	± 10
750	09/15/2023	7732		Head	21.4	21.3	8.59	0.427	8.54	- 0.58	± 10
750	09/20/2023	7732		Head	20.8	20.7	8.59	0.428	8.56	- 0.35	± 10
835	09/14/2023	7732	4d165	Head	21.9	21.9	9.74	0.501	10.02	+ 2.87	± 10
835	09/22/2023	7732		Head	21.6	21.5	9.74	0.500	10.00	+ 2.67	± 10
1 640	09/14/2023	3768	345	Head	21.5	21.5	33.8	1.59	31.80	- 5.92	± 10
1 640	09/15/2023	3768		Head	21.3	21.2	33.8	1.62	32.40	- 4.14	± 10
1 800	09/13/2023	3903	2d015	Head	20.9	20.8	37.8	1.86	37.20	- 1.59	± 10
1 800	10/04/2023	3903		Head	21.9	21.8	37.8	1.91	38.20	+ 1.06	± 10
1 900	09/12/2023	3903	5d061	Head	21.8	21.6	38.9	1.96	39.20	+ 0.77	± 10
1 900	09/16/2023	3903		Head	21.6	21.7	38.9	2.03	40.60	+ 4.37	± 10
2 300	09/18/2023	7679	1010	Head	21.9	21.8	48.3	2.53	50.60	+ 4.76	± 10
2 300	09/19/2023	7679		Head	21.2	21.1	48.3	2.54	50.80	+ 5.18	± 10
2 600	09/13/2023	7370	1106	Head	22.1	22.0	55.6	2.86	57.20	+ 2.88	± 10
2 600	09/14/2023	7370		Head	21.5	21.4	55.6	2.89	57.80	+ 3.96	± 10
2 600	09/15/2023	7679		Head	21.1	21.2	55.6	2.83	56.60	+ 1.80	± 10
2 600	09/20/2023	7679		Head	21.5	21.4	55.6	2.81	56.20	+ 1.08	± 10
2 600	10/13/2023	7679		Head	20.2	20.1	55.6	2.75	55.00	- 1.08	± 10
2 600	10/13/2023	7679		Head	20.2	20.1	55.6	2.71	54.20	- 2.52	± 10
2 600	10/12/2023	7679		Head	20.1	20.0	55.6	2.73	54.60	- 1.80	± 10
2 600	10/12/2023	7679		Head	20.1	20.0	55.6	2.70	54.00	- 2.88	± 10
3 500	09/19/2023	7732	1040	Head	21.1	21.0	66.5	3.47	69.40	+ 4.36	± 10
3 500	09/25/2023	7732		Head	21.8	21.6	66.5	3.48	69.60	+ 4.66	± 10
3 500	09/26/2023	7732		Head	22.1	21.9	66.5	3.47	69.40	+ 4.36	± 10
3 500	09/27/2023	7732		Head	22.0	21.8	66.5	3.49	69.80	+ 4.96	± 10
3 500	10/04/2023	7732		Head	20.4	20.3	66.5	3.55	71.00	+ 6.77	± 10
3 500	10/13/2023	7732		Head	22.1	22.0	66.5	3.20	64.00	- 3.76	± 10
3 500	10/11/2023	7732		Head	22.1	22.0	66.5	3.17	63.40	- 4.66	± 10
3 500	10/12/2023	7732		Head	22.5	22.3	66.5	3.18	63.60	- 4.36	± 10
3 500	10/15/2023	3797		Head	22.0	21.8	66.5	3.21	64.20	- 3.46	± 10
3 700	09/19/2023	7732	1066	Head	21.1	21.0	67.9	3.45	69.00	+ 1.62	± 10
3 700	09/25/2023	7732		Head	21.8	21.6	67.9	3.46	69.20	+ 1.91	± 10
3 700	09/26/2023	7732		Head	22.1	21.9	67.9	3.46	69.20	+ 1.91	± 10
3 700	09/27/2023	7732		Head	22.0	21.8	67.9	3.49	69.80	+ 2.80	± 10
3 700	10/04/2023	7732		Head	20.4	20.3	67.9	3.37	67.40	- 0.74	± 10
3 700	10/13/2023	7732		Head	22.1	22.0	67.9	3.20	64.00	- 5.74	± 10
3 700	10/11/2023	7732		Head	22.1	22.0	67.9	3.38	67.60	- 0.44	± 10
3 700	10/12/2023	7732		Head	22.5	22.3	67.9	3.14	62.80	- 7.51	± 10
3 700	10/15/2023	3797		Head	22.0	21.8	67.9	3.26	65.20	- 3.98	± 10

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[㎒]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
3 900	10/04/2023	7732	1019	Head	20.4	20.3	69.7	3.32	66.40	- 4.73	± 10
3 900	10/13/2023	7732		Head	22.1	22.0	69.7	3.38	67.60	- 3.01	± 10
3 900	10/11/2023	7732		Head	22.1	22.0	69.7	3.32	66.40	- 4.73	± 10
3 900	10/12/2023	7732		Head	22.5	22.3	69.7	3.30	66.00	- 5.31	± 10
3 900	10/15/2023	3797		Head	22.0	21.8	69.7	3.41	68.20	- 2.15	± 10

System Verification Results – Extremity SAR Input Power: 50 ㎽

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{10g} (SPEAG)	50mW Measured SAR_{10g}	1 W Normalized SAR_{10g}	Deviation	Limit
[㎒]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
13	09/14/2023	3076	1016	Head	21.4	21.3	0.353	0.017	0.340	- 3.68	± 10
5 250	09/21/2023	3797	1317	Head	21.3	21.2	22.6	1.17	23.40	+ 3.54	± 10
5 600	09/22/2023	3797		Head	20.5	20.4	23.0	1.17	23.40	+ 1.74	± 10
5 800	09/25/2023	3797		Head	22.5	22.4	21.8	1.10	22.00	+ 0.92	± 10

12.3 System Verification Procedure

SAR measurement was prior to assessment, the system is verified to the ± 10 % of the specifications at each frequency Band by using the system verification kit. (Graphic Plots Attached)
- Cabling the system, using the verification kit equipment.
- Generate about 50 ㎽ Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;
SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

13. SAR Test Data Summary

13.1 SAR Measurement Results

GSM 850 Head SAR													
Frequency		Ant.	Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)				(W/kg)		(W/kg)	
836.6	190	E	GSM	31.2	29.97	-0.12	Left Cheek	1:8.3		0.444	1.327	**0.589**	A1
836.6	190	E	GSM	31.2	29.97	-0.16	Left Tilt	1:8.3		0.403	1.327	0.535	-
836.6	190	E	GSM	31.2	29.97	-0.09	Right Cheek	1:8.3		0.340	1.327	0.451	-
836.6	190	E	GSM	31.2	29.97	-0.12	Right Tilt	1:8.3		0.282	1.327	0.374	-
836.6	190	E	GPRS 4Tx	25.2	24.21	-0.10	Left Cheek	1:2.07		0.406	1.256	0.510	-
836.6	190	E	GPRS 4Tx	25.2	24.21	-0.14	Left Tilt	1:2.07		0.289	1.256	0.363	-
836.6	190	E	GPRS 4Tx	25.2	24.21	-0.13	Right Cheek	1:2.07		0.130	1.256	0.163	-
836.6	190	E	GPRS 4Tx	25.2	24.21	-0.12	Right Tilt	1:2.07		0.160	1.256	0.201	-
836.6	190	A	GSM	34.5	33.31	-0.11	Left Cheek	1:8.3		0.019	1.315	0.025	-
836.6	190	A	GSM	34.5	33.31	0.07	Left Tilt	1:8.3		0.011	1.315	0.014	-
836.6	190	A	GSM	34.5	33.31	0.17	Right Cheek	1:8.3		0.028	1.315	0.037	-
836.6	190	A	GSM	34.5	33.31	0.18	Right Tilt	1:8.3		0.00904	1.315	0.012	-
836.6	190	A	GPRS 2Tx	32.5	32.09	-0.04	Left Cheek	1:4.15		0.025	1.099	0.027	-
836.6	190	A	GPRS 2Tx	32.5	32.09	-0.05	Left Tilt	1:4.15		0.013	1.099	0.014	-
836.6	190	A	GPRS 2Tx	32.5	32.09	-0.11	Right Cheek	1:4.15		0.038	1.099	0.042	-
836.6	190	A	GPRS 2Tx	32.5	32.09	-0.14	Right Tilt	1:4.15		0.014	1.099	0.015	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

GSM 1900 Head SAR													
Frequency		Ant.	Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)				(W/kg)		(W/kg)	
1 909.8	810	A	GSM	31.0	30.01	-0.01	Left Cheek	1:8.3		0.030	1.291	0.038	-
1 909.8	810	A	GSM	31.0	30.01	0.12	Left Tilt	1:8.3		0.00632	1.291	0.008	-
1 909.8	810	A	GSM	31.0	30.01	0.01	Right Cheek	1:8.3		0.018	1.291	0.023	-
1 909.8	810	A	GSM	31.0	30.01	-0.09	Right Tilt	1:8.3		0.011	1.291	0.014	-
1 880	661	A	GPRS 2Tx	28.5	27.44	-0.15	Left Cheek	1:4.15		0.054	1.276	**0.069**	A2
1 880	661	A	GPRS 2Tx	28.5	27.44	0.12	Left Tilt	1:4.15		0.012	1.276	0.015	-
1 880	661	A	GPRS 2Tx	28.5	27.44	0.01	Right Cheek	1:4.15		0.026	1.276	0.033	-
1 880	661	A	GPRS 2Tx	28.5	27.44	0.14	Right Tilt	1:4.15		0.023	1.276	0.029	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

UMTS Band 5 Head SAR

Frequency		Ant.	Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)				(W/kg)		**(W/kg)**	
836.6	4183	E	RMC	22.0	21.61	-0.05	Left Cheek	1:1		0.741	1.094	0.811	-
836.6	4183	E	RMC	22.0	21.61	-0.09	Left Tilt	1:1		0.547	1.094	0.598	-
836.6	4183	E	RMC	22.0	21.61	-0.18	Right Cheek	1:1		0.459	1.094	0.502	-
836.6	4183	E	RMC	22.0	21.61	-0.10	Right Tilt	1:1		0.348	1.094	0.381	-
826.4	4132	E	RMC	22.0	21.66	-0.12	Left Cheek	1:1		0.770	1.081	0.833	-
846.6	4233	E	RMC	22.0	21.54	-0.04	Left Cheek	1:1		0.858	1.112	**0.954**	A3
846.6	4233	E	RMC	22.0	21.54	0.02	Left Cheek	1:1		0.767	1.112	0.853	*
836.6	4183	A	RMC	25.5	24.31	-0.10	Left Cheek	1:1	127	0.032	1.315	0.042	-
836.6	4183	A	RMC	25.5	24.31	-0.19	Left Tilt	1:1	127	0.019	1.315	0.025	-
836.6	4183	A	RMC	25.5	24.31	0.13	Right Cheek	1:1	127	0.043	1.315	**0.057**	-
836.6	4183	A	RMC	25.5	24.31	-0.16	Right Tilt	1:1	127	0.018	1.315	0.024	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

Note: * Data entry indicate Variability measurement.

UMTS Band 4 Head SAR

Frequency		Ant.	Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)				(W/kg)		**(W/kg)**	
1 732.4	1412	A	RMC	23.8	22.79	-0.05	Left Cheek	1:1	121	**0.139**	1.262	**0.175**	A4
1 732.4	1412	A	RMC	23.8	22.79	0.14	Left Tilt	1:1	121	0.049	1.262	0.062	-
1 732.4	1412	A	RMC	23.8	22.79	0.02	Right Cheek	1:1	121	0.075	1.262	0.095	-
1 732.4	1412	A	RMC	23.8	22.79	0.15	Right Tilt	1:1	121	0.060	1.262	0.076	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

UMTS Band 2Head SAR

Frequency		Ant.	Mode	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)				(W/kg)		**(W/kg)**	
1 880	9400	A	RMC	24.8	23.78	-0.18	Left Cheek	1:1	138	**0.084**	1.265	**0.106**	A5
1 880	9400	A	RMC	24.8	23.78	0.07	Left Tilt	1:1	138	0.025	1.265	0.032	-
1 880	9400	A	RMC	24.8	23.78	-0.16	Right Cheek	1:1	138	0.050	1.265	0.063	-
1 880	9400	A	RMC	24.8	23.78	0.06	Right Tilt	1:1	138	0.041	1.265	0.052	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

LTE FDD Band 7 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 560	21350	QPSK	B	20	24.0	23.76	0.12	Left Cheek	0	1	49	1:1		0.243	1.057	0.257	-
2 560	21350	QPSK	B	20	23.0	22.38	0.04	Left Cheek	1	50	49	1:1		0.178	1.153	0.205	-
2 560	21350	QPSK	B	20	24.0	23.76	-0.01	Left Tilt	0	1	49	1:1		0.056	1.057	0.059	-
2 560	21350	QPSK	B	20	23.0	22.38	0.02	Left Tilt	1	50	49	1:1		0.053	1.153	0.061	-
2 560	21350	QPSK	B	20	24.0	23.76	0.12	Right Cheek	0	1	49	1:1		0.062	1.057	0.066	-
2 560	21350	QPSK	B	20	23.0	22.38	-0.11	Right Cheek	1	50	49	1:1		0.071	1.153	0.082	-
2 560	21350	QPSK	B	20	24.0	23.76	0.19	Right Tilt	0	1	49	1:1		0.035	1.057	0.037	-
2 560	21350	QPSK	B	20	23.0	22.38	0.18	Right Tilt	1	50	49	1:1		0.030	1.153	0.035	-
2 510	20850	QPSK	F	20	16.5	15.48	-0.12	Left Cheek	0	1	49	1:1		0.269	1.265	0.340	-
2 510	20850	QPSK	F	20	16.5	15.55	-0.09	Left Cheek	0	50	0	1:1		0.282	1.245	0.351	-
2 510	20850	QPSK	F	20	16.5	15.48	-0.06	Left Tilt	0	1	49	1:1		0.273	1.265	0.345	-
2 510	20850	QPSK	F	20	16.5	15.55	-0.08	Left Tilt	0	50	0	1:1		0.285	1.245	0.355	-
2 510	20850	QPSK	F	20	16.5	15.48	-0.01	Right Cheek	0	1	49	1:1		0.625	1.265	0.791	-
2 510	20850	QPSK	F	20	16.5	15.55	-0.01	Right Cheek	0	50	0	1:1		0.660	1.245	0.822	
2 535	21100	QPSK	F	20	16.5	15.49	0.09	Right Cheek	0	50	25	1:1		0.449	1.262	0.567	-
2 560	21350	QPSK	F	20	16.5	15.53	-0.00	Right Cheek	0	50	0	1:1		0.523	1.250	0.654	-
2 510	20850	QPSK	F	20	16.5	15.51	0.02	Right Cheek	0	100	0	1:1		0.601	1.256	0.755	-
2 510	20850	QPSK	F	20	16.5	15.48	-0.11	Right Tilt	0	1	49	1:1		0.615	1.265	0.778	-
2 510	20850	QPSK	F	20	16.5	15.55	-0.04	Right Tilt	0	50	0	1:1		0.646	1.245	0.804	-
2 535	21100	QPSK	F	20	16.5	15.49	0.05	Right Tilt	0	50	25	1:1		0.613	1.262	0.774	-
2 560	21350	QPSK	F	20	16.5	15.53	0.01	Right Tilt	0	50	0	1:1		0.581	1.250	0.726	-
2 510	20850	QPSK	F	20	16.5	15.51	-0.01	Right Tilt	0	100	0	1:1		0.660	1.256	**0.829**	A6
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 12 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
707.5	23095	QPSK	A	10	25	24.37	0.11	Left Cheek	0	1	24	1:1	0	0.079	1.156	0.091	-
707.5	23095	QPSK	A	10	24	22.99	0.11	Left Cheek	1	25	0	1:1	0	0.065	1.262	0.082	-
707.5	23095	QPSK	A	10	25	24.37	0.10	Left Tilt	0	1	24	1:1	0	0.053	1.156	0.061	-
707.5	23095	QPSK	A	10	24	22.99	0.06	Left Tilt	1	25	0	1:1	0	0.040	1.262	0.050	-
707.5	23095	QPSK	A	10	25	24.37	0.11	Right Cheek	0	1	24	1:1	0	0.099	1.156	0.114	-
707.5	23095	QPSK	A	10	24	22.99	0.07	Right Cheek	1	25	0	1:1	0	0.079	1.262	0.100	-
707.5	23095	QPSK	A	10	25	24.37	-0.06	Right Tilt	0	1	24	1:1	0	0.052	1.156	0.180	-
707.5	23095	QPSK	A	10	24	22.99	0.06	Right Tilt	1	25	0	1:1	0	0.041	1.262	0.180	-
707.5	23095	QPSK	E	10	22.0	21.25	-0.03	Left Cheek	0	1	49	1:1		0.378	1.189	0.449	-
707.5	23095	QPSK	E	10	22.0	21.28	-0.08	Left Cheek	0	25	12	1:1		0.376	1.180	0.444	-
707.5	23095	QPSK	E	10	22.0	21.25	-0.08	Left Tilt	0	1	49	1:1		0.432	1.189	**0.513**	A7
707.5	23095	QPSK	E	10	22.0	21.28	-0.16	Left Tilt	0	25	12	1:1		0.430	1.180	0.508	-
707.5	23095	QPSK	E	10	22.0	21.25	0.17	Right Cheek	0	1	49	1:1		0.260	1.189	0.309	-
707.5	23095	QPSK	E	10	22.0	21.28	-0.04	Right Cheek	0	25	12	1:1		0.262	1.180	0.309	
707.5	23095	QPSK	E	10	22.0	21.25	0.19	Right Tilt	0	1	49	1:1		0.243	1.189	0.289	-
707.5	23095	QPSK	E	10	22.0	21.28	-0.12	Right Tilt	0	25	12	1:1		0.239	1.180	0.282	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

LTE FDD Band 13 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
782	23230	QPSK	A	10	25.0	23.98	0.13	Left Cheek	0	1	0	1:1	0	0.044	1.265	0.056	-
782	23230	QPSK	A	10	24.0	23.05	0.19	Left Cheek	1	25	0	1:1	0	0.045	1.245	0.056	-
782	23230	QPSK	A	10	25.0	23.98	-0.10	Left Tilt	0	1	0	1:1	0	0.029	1.265	0.037	-
782	23230	QPSK	A	10	24.0	23.05	0.18	Left Tilt	1	25	0	1:1	0	0.030	1.245	0.037	-
782	23230	QPSK	A	10	25.0	23.98	-0.11	Right Cheek	0	1	0	1:1	0	0.068	1.265	0.086	-
782	23230	QPSK	A	10	24.0	23.05	0.13	Right Cheek	1	25	0	1:1	0	0.054	1.245	0.067	-
782	23230	QPSK	A	10	25.0	23.98	-0.19	Right Tilt	0	1	0	1:1	0	0.034	1.265	0.043	-
782	23230	QPSK	A	10	24.0	23.05	0.06	Right Tilt	1	25	0	1:1	0	0.029	1.245	0.036	-
782	23230	QPSK	E	10	22.0	21.49	-0.10	Left Cheek	0	1	24	1:1		0.649	1.125	0.730	-
782	23230	QPSK	E	10	22.0	21.59	-0.11	Left Cheek	0	25	24	1:1		0.676	1.099	0.743	-
782	23230	QPSK	E	10	22.0	21.49	-0.15	Left Tilt	0	1	24	1:1		0.668	1.125	0.751	-
782	23230	QPSK	E	10	22.0	21.59	-0.14	Left Tilt	0	25	24	1:1		0.737	1.099	**0.810**	A8
782	23230	QPSK	E	10	22.0	21.46	-0.06	Left Tilt	0	50	0	1:1		0.681	1.132	0.771	-
782	23230	QPSK	E	10	22.0	21.49	0.04	Right Cheek	0	1	24	1:1		0.430	1.125	0.484	
782	23230	QPSK	E	10	22.0	21.59	-0.09	Right Cheek	0	25	24	1:1		0.443	1.099	0.487	-
782	23230	QPSK	E	10	22.0	21.49	0.09	Right Tilt	0	1	24	1:1		0.388	1.125	0.437	-
782	23230	QPSK	E	10	22.0	21.59	-0.12	Right Tilt	0	25	24	1:1		0.404	1.099	0.444	

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

LTE FDD Band 14 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
793	23330	QPSK	A	10	25.0	24.08	0.13	Left Cheek	0	1	0	1:1	0	0.023	1.140	0.026	-
793	23330	QPSK	A	10	24.0	22.83	0.08	Left Cheek	1	25	0	1:1	0	0.030	1.107	0.033	-
793	23330	QPSK	A	10	25.0	24.08	0.11	Left Tilt	0	1	0	1:1	0	0.022	1.140	0.025	-
793	23330	QPSK	A	10	24.0	22.83	0.08	Left Tilt	1	25	0	1:1	0	0.023	1.107	0.025	-
793	23330	QPSK	A	10	25.0	24.08	0.03	Right Cheek	0	1	0	1:1	0	0.049	1.140	0.056	-
793	23330	QPSK	A	10	24.0	22.83	0.11	Right Cheek	1	25	0	1:1	0	0.047	1.107	0.052	-
793	23330	QPSK	A	10	25.0	24.08	0.08	Right Tilt	0	1	0	1:1	0	0.024	1.140	0.027	-
793	23330	QPSK	A	10	24.0	22.83	0.12	Right Tilt	1	25	0	1:1	0	0.023	1.107	0.025	-
793	23330	QPSK	E	10	22.0	21.43	-0.06	Left Cheek	0	1	0	1:1		0.758	1.140	0.864	-
793	23330	QPSK	E	10	22.0	21.56	-0.06	Left Cheek	0	25	0	1:1		0.754	1.107	0.834	-
793	23330	QPSK	E	10	22.0	21.62	-0.11	Left Cheek	0	50	0	1:1		0.784	1.091	0.856	-
793	23330	QPSK	E	10	22.0	21.43	-0.00	Left Tilt	0	1	0	1:1		0.791	1.140	**0.902**	A9
793	23330	QPSK	E	10	22.0	21.56	-0.15	Left Tilt	0	25	0	1:1		0.800	1.107	0.885	-
793	23330	QPSK	E	10	22.0	21.62	-0.08	Left Tilt	0	50	0	1:1		0.771	1.091	0.842	-
793	23330	QPSK	E	10	22.0	21.43	0.16	Right Cheek	0	1	0	1:1		0.555	1.140	0.633	-
793	23330	QPSK	E	10	22.0	21.56	0.03	Right Cheek	0	25	0	1:1		0.541	1.107	0.599	-
793	23330	QPSK	E	10	22.0	21.43	0.02	Right Tilt	0	1	0	1:1		0.508	1.140	0.579	-
793	23330	QPSK	E	10	22.0	21.56	-0.03	Right Tilt	0	25	0	1:1		0.507	1.107	0.561	-
793	23330	QPSK	E	10	22.0	21.56	-0.08	Left Tilt	0	25	0	1:1		0.779	1.107	0.862	*

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Note: * Data entry indicate Variability measurement.

LTE FDD Band 25 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 905	26590	QPSK	A	20	24.5	23.49	0.08	Left Cheek	0	1	0	1:1	0	0.085	1.262	0.107	-
1 905	26590	QPSK	A	20	23.5	22.34	0.04	Left Cheek	1	50	49	1:1	0	0.055	1.306	0.072	-
1 905	26590	QPSK	A	20	24.5	23.49	0.10	Left Tilt	0	1	0	1:1	0	0.032	1.262	0.040	-
1 905	26590	QPSK	A	20	23.5	22.34	0.03	Left Tilt	1	50	49	1:1	0	0.023	1.306	0.030	-
1 905	26590	QPSK	A	20	24.5	23.49	0.16	Right Cheek	0	1	0	1:1	0	0.052	1.262	0.066	-
1 905	26590	QPSK	A	20	23.5	22.34	0.16	Right Cheek	1	50	49	1:1	0	0.038	1.306	0.050	-
1 905	26590	QPSK	A	20	24.5	23.49	0.17	Right Tilt	0	1	0	1:1	0	0.041	1.262	0.052	-
1 905	26590	QPSK	A	20	23.5	22.34	0.12	Right Tilt	1	50	49	1:1	0	0.027	1.306	0.035	-
1 905	26590	QPSK	F	20	19.0	18.33	0.10	Left Cheek	0	1	0	1:1		0.562	1.167	0.656	-
1 860	26140	QPSK	F	20	19.0	18.12	0.01	Left Cheek	0	50	25	1:1		0.554	1.225	0.679	-
1 905	26590	QPSK	F	20	19.0	18.33	0.12	Left Tilt	0	1	0	1:1		0.570	1.167	0.665	-
1 860	26140	QPSK	F	20	19.0	18.12	0.03	Left Tilt	0	50	25	1:1		0.542	1.225	0.664	-
1 905	26590	QPSK	F	20	19.0	18.33	-0.05	Right Cheek	0	1	0	1:1		0.677	1.167	0.790	-
1 860	26140	QPSK	F	20	19.0	18.12	-0.06	Right Cheek	0	50	25	1:1		0.672	1.225	0.823	
1 882.5	26365	QPSK	F	20	19.0	18.10	-0.05	Right Cheek	0	50	49	1:1		0.670	1.230	0.824	-
1 905	26590	QPSK	F	20	19.0	18.08	0.01	Right Cheek	0	50	25	1:1		0.667	1.236	0.824	-
1 860	26140	QPSK	F	20	19.0	18.06	-0.02	Right Cheek	0	100	0	1:1		0.664	1.242	0.825	-
1 905	26590	QPSK	F	20	19.0	18.33	-0.04	Right Tilt	0	1	0	1:1		0.703	1.167	0.820	-
1 860	26140	QPSK	F	20	19.0	17.99	0.05	Right Tilt	0	1	99	1:1		0.666	1.262	0.840	-
1 882.5	26365	QPSK	F	20	19.0	18.05	0.04	Right Tilt	0	1	49	1:1		0.677	1.245	0.843	-
1 860	26140	QPSK	F	20	19.0	18.12	0.03	Right Tilt	0	50	25	1:1		0.677	1.225	0.829	-
1 882.5	26365	QPSK	F	20	19.0	18.10	0.04	Right Tilt	0	50	49	1:1		0.691	1.230	**0.850**	A10
1 905	26590	QPSK	F	20	19.0	18.08	0.01	Right Tilt	0	50	25	1:1		0.686	1.236	0.848	
1 860	26140	QPSK	F	20	19.0	18.06	0.04	Right Tilt	0	100	0	1:1		0.665	1.242	0.826	
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LTE FDD Band 26 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
831.5	26865	QPSK	A	15	25.0	24.24	-0.15	Left Cheek	0	1	0	1:1	0	0.027	1.191	0.032	-
831.5	26865	QPSK	A	15	24.0	22.74	0.13	Left Cheek	1	36	18	1:1	0	0.029	1.337	0.039	-
831.5	26865	QPSK	A	15	25.0	24.24	-0.02	Left Tilt	0	1	0	1:1	0	0.029	1.191	0.035	-
831.5	26865	QPSK	A	15	24.0	22.74	0.08	Left Tilt	1	36	18	1:1	0	0.021	1.337	0.028	-
831.5	26865	QPSK	A	15	25.0	24.24	-0.15	Right Cheek	0	1	0	1:1	0	0.053	1.191	0.063	-
831.5	26865	QPSK	A	15	24.0	22.74	-0.18	Right Cheek	1	36	18	1:1	0	0.035	1.337	0.047	-
831.5	26865	QPSK	A	15	25.0	24.24	-0.10	Right Tilt	0	1	0	1:1	0	0.028	1.191	0.033	-
831.5	26865	QPSK	A	15	24.0	22.74	0.12	Right Tilt	1	36	18	1:1	0	0.017	1.337	0.023	-
831.5	26865	QPSK	E	15	22.0	21.41	-0.10	Left Cheek	0	1	36	1:1		0.777	1.146	0.890	-
831.5	26865	QPSK	E	15	22.0	21.49	-0.15	Left Cheek	0	36	18	1:1		0.755	1.125	0.849	-
831.5	26865	QPSK	E	15	22.0	21.51	-0.01	Left Cheek	0	75	0	1:1		0.700	1.119	0.784	-
831.5	26865	QPSK	E	15	22.0	21.41	-0.14	Left Tilt	0	1	36	1:1		0.812	1.146	0.930	
831.5	26865	QPSK	E	15	22.0	21.49	-0.08	Left Tilt	0	36	18	1:1		0.856	1.125	**0.963**	A11
831.5	26865	QPSK	E	15	22.0	21.51	-0.13	Left Tilt	0	36	18	1:1		0.849	1.119	0.950	-
831.5	26865	QPSK	E	15	22.0	21.41	-0.17	Right Cheek	0	1	36	1:1		0.458	1.146	0.525	-
831.5	26865	QPSK	E	15	22.0	21.49	-0.19	Right Cheek	0	36	18	1:1		0.464	1.125	0.522	-
831.5	26865	QPSK	E	15	22.0	21.41	-0.03	Right Tilt	0	1	36	1:1		0.454	1.146	0.520	-
831.5	26865	QPSK	E	15	22.0	21.49	-0.00	Right Tilt	0	36	18	1:1		0.470	1.125	0.529	-
831.5	26865	QPSK	E	15	22.0	21.49	-0.10	Left Tilt	0	36	18	1:1		0.834	1.125	0.938	*
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Note: * Data entry indicate Variability measurement.

LTE FDD Band 30 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 310	27710	QPSK	A	10	23.5	22.32	0.17	Left Cheek	0	1	24	1:1		0.013	1.312	0.017	-
2 310	27710	QPSK	A	10	22.5	21.18	0.15	Left Cheek	1	25	24	1:1		0.00622	1.355	0.008	-
2 310	27710	QPSK	A	10	23.5	22.32	0.14	Left Tilt	0	1	24	1:1		0.0000166	1.312	0.000	-
2 310	27710	QPSK	A	10	22.5	21.18	0.13	Left Tilt	1	25	24	1:1		0.000576	1.355	0.001	-
2 310	27710	QPSK	A	10	23.5	22.32	0.00	Right Cheek	0	1	24	1:1		0.015	1.312	0.020	-
2 310	27710	QPSK	A	10	22.5	21.18	0.00	Right Cheek	1	25	24	1:1		0.010	1.355	0.014	-
2 310	27710	QPSK	A	10	23.5	22.32	0.02	Right Tilt	0	1	24	1:1		0.00817	1.312	0.011	-
2 310	27710	QPSK	A	10	22.5	21.18	0.12	Right Tilt	1	25	24	1:1		0.00555	1.355	0.008	-
2 310	27710	QPSK	F	10	17.5	16.87	0.00	Left Cheek	0	1	24	1:1		0.349	1.156	0.403	-
2 310	27710	QPSK	F	10	17.5	16.44	-0.01	Left Cheek	0	25	12	1:1		0.349	1.276	0.445	-
2 310	27710	QPSK	F	10	17.5	16.87	-0.06	Left Tilt	0	1	24	1:1		0.490	1.156	0.566	-
2 310	27710	QPSK	F	10	17.5	16.44	-0.10	Left Tilt	0	25	12	1:1		0.494	1.276	0.630	
2 310	27710	QPSK	F	10	17.5	16.87	-0.03	Right Cheek	0	1	24	1:1		0.649	1.156	0.750	-
2 310	27710	QPSK	F	10	17.5	16.44	0.01	Right Cheek	0	25	12	1:1		0.651	1.276	0.831	-
2 310	27710	QPSK	F	10	17.5	16.39	0.18	Right Cheek	0	50	0	1:1		0.625	1.291	0.807	-
2 310	27710	QPSK	F	10	17.5	16.87	-0.02	Right Tilt	0	1	24	1:1		0.655	1.156	0.757	-
2 310	27710	QPSK	F	10	17.5	16.44	0.06	Right Tilt	0	25	12	1:1		**0.661**	1.276	**0.843**	A12
2 310	27710	QPSK	F	10	17.5	16.39	0.03	Right Tilt	0	50	0	1:1		0.650	1.291	0.839	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

LTE TDD Band 38 Head SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2595	38000	QPSK	B	20	25.0	24.23	0.07	Left Cheek	0	1	49	1:1.58		0.153	1.194	0.183	-
2580	37850	QPSK	B	20	24.0	23.25	0.08	Left Cheek	1	50	25	1:1.58		0.115	1.189	0.137	-
2595	38000	QPSK	B	20	25.0	24.23	0.01	Left Tilt	0	1	49	1:1.58		0.041	1.194	0.049	-
2580	37850	QPSK	B	20	24.0	23.25	0.06	Left Tilt	1	50	25	1:1.58		0.038	1.189	0.045	-
2595	38000	QPSK	B	20	25.0	24.23	0.08	Right Cheek	0	1	49	1:1.58		0.055	1.194	0.066	-
2580	37850	QPSK	B	20	24.0	23.25	0.11	Right Cheek	1	50	25	1:1.58		0.046	1.189	0.055	-
2595	38000	QPSK	B	20	25.0	24.23	0.08	Right Tilt	0	1	49	1:1.58		0.045	1.194	0.054	-
2580	37850	QPSK	B	20	24.0	23.25	0.13	Right Tilt	1	50	25	1:1.58		0.038	1.189	0.045	-
2 595	38000	QPSK	F	20	20.0	19.36	-0.18	Left Cheek	0	1	49	1:1.58		0.492	1.159	0.570	-
2 595	38000	QPSK	F	20	20.0	19.42	0.07	Left Cheek	0	50	0	1:1.58		0.502	1.143	0.574	-
2 595	38000	QPSK	F	20	20.0	19.36	0.08	Left Tilt	0	1	49	1:1.58		0.487	1.159	0.564	-
2 595	38000	QPSK	F	20	20.0	19.42	0.02	Left Tilt	0	50	0	1:1.58		0.496	1.143	0.567	-
2 595	38000	QPSK	F	20	20.0	19.36	-0.03	Right Cheek	0	1	49	1:1.58		0.838	1.159	0.971	-
2 580	37850	QPSK	F	20	20.0	19.26	0.04	Right Cheek	0	1	49	1:1.58		0.871	1.186	1.033	-
2 610	38150	QPSK	F	20	20.0	19.32	0.08	Right Cheek	0	1	0	1:1.58		0.812	1.169	0.950	-
2 595	38000	QPSK	F	20	20.0	19.42	0.00	Right Cheek	0	50	0	1:1.58		0.859	1.143	0.982	-
2 580	37850	QPSK	F	20	20.0	19.37	0.05	Right Cheek	0	50	25	1:1.58		0.887	1.156	1.025	-
2 610	38150	QPSK	F	20	20.0	19.36	-0.02	Right Cheek	0	50	0	1:1.58		0.816	1.159	0.946	-
2 595	38000	QPSK	F	20	20.0	19.39	-0.01	Right Cheek	0	100	0	1:1.58		0.856	1.151	0.985	-
2 595	38000	QPSK	F	20	20.0	19.36	-0.08	Right Tilt	0	1	49	1:1.58		0.886	1.159	1.027	
2 580	37850	QPSK	F	20	20.0	19.26	-0.06	Right Tilt	0	1	49	1:1.58		0.931	1.186	1.104	-
2 610	38150	QPSK	F	20	20.0	19.32	-0.00	Right Tilt	0	1	0	1:1.58		0.875	1.169	1.023	-
2 595	38000	QPSK	F	20	20.0	19.42	-0.09	Right Tilt	0	50	0	1:1.58		0.908	1.143	1.038	-
2 580	37850	QPSK	F	20	20.0	19.37	0.06	Right Tilt	0	50	25	1:1.58		**0.999**	1.156	**1.155**	A13
2 610	38150	QPSK	F	20	20.0	19.36	0.05	Right Tilt	0	50	0	1:1.58		0.889	1.159	1.030	-
2 595	38000	QPSK	F	20	20.0	19.39	-0.12	Right Tilt	0	100	0	1:1.58		0.950	1.151	1.093	-
2 580	37850	QPSK	F	20	20.0	19.37	-0.01	Right Tilt	0	50	25	1:1.58		0.956	1.156	1.105	*

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Note: * Data entry indicate Variability measurement.

LTE TDD Band 41 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 593	40620	QPSK	B	20	21.4	21.02	0.09	Left Cheek	0	1	0	1:1.58		0.063	1.091	0.069	-
2 593	40620	QPSK	B	20	21.4	20.94	0.17	Left Cheek	1	50	0	1:1.58		0.063	1.112	0.070	-
2 593	40620	QPSK	B	20	21.4	21.02	0.12	Left Tilt	0	1	0	1:1.58		0.017	1.091	0.019	-
2 593	40620	QPSK	B	20	21.4	20.94	0.11	Left Tilt	1	50	0	1:1.58		0.017	1.112	0.019	-
2 593	40620	QPSK	B	20	21.4	21.02	0.18	Right Cheek	0	1	0	1:1.58		0.024	1.091	0.026	-
2 593	40620	QPSK	B	20	21.4	20.94	0.15	Right Cheek	1	50	0	1:1.58		0.024	1.112	0.027	-
2 593	40620	QPSK	B	20	21.4	21.02	0.15	Right Tilt	0	1	0	1:1.58		0.021	1.091	0.023	-
2 593	40620	QPSK	B	20	21.4	20.94	0.18	Right Tilt	1	50	0	1:1.58		0.020	1.112	0.022	-
2 593	40620	QPSK	B	20	23.0	22.50	0.19	Left Cheek	0	50	0	1:2.31		0.063	1.122	0.079	**
Up-link Carrier Aggregation Power class 3 (41C)																	
PCC 2 593	40620	QPSK	B	20	21.4	20.69	0.02	Left Cheek	0	50	0	1:1.58		0.062	1.114	0.073	-
SCC 2 573.2	40422	QPSK	B	20					0	50	49						
Up-link Carrier Aggregation Power class 2(HPUE) (41C)																	
PCC 2 593	40620	QPSK	B	20	23.0	22.52	0.15	Left Cheek	0	50	0	1:2.31		0.063	1.125	0.070	**
SCC 2 573.2	40422	QPSK	B	20					0	50	49						
2 593	40620	QPSK	F	20	18.5	17.76	0.13	Left Cheek	0	1	0	1:1.58		0.241	1.186	0.286	-
2 593	40620	QPSK	F	20	18.5	17.88	0.03	Left Cheek	0	50	0	1:1.58		0.246	1.153	0.284	-
2 593	40620	QPSK	F	20	18.5	17.76	-0.05	Left Tilt	0	1	0	1:1.58		0.228	1.186	0.270	-
2 593	40620	QPSK	F	20	18.5	17.88	-0.02	Left Tilt	0	50	0	1:1.58		0.238	1.153	0.275	-
2 593	40620	QPSK	F	20	18.5	17.76	-0.12	Right Cheek	0	1	0	1:1.58		0.536	1.186	0.636	-
2 506	39750	QPSK	F	20	18.5	17.75	-0.01	Right Cheek	0	1	0	1:1.58		0.562	1.189	0.668	-
2 549.5	40815	QPSK	F	20	18.5	17.66	-0.03	Right Cheek	0	1	0	1:1.58		0.428	1.213	0.519	-
2 636.5	41055	QPSK	F	20	18.5	17.64	-0.04	Right Cheek	0	1	49	1:1.58		0.445	1.219	0.542	-
2 680	41490	QPSK	F	20	18.5	17.61	-0.06	Right Cheek	0	1	49	1:1.58		0.436	1.227	0.535	-
2 593	40620	QPSK	F	20	18.5	17.88	0.07	Right Cheek	0	50	0	1:1.58		0.550	1.153	0.634	-
2 506	39750	QPSK	F	20	18.5	17.86	0.01	Right Cheek	0	50	49	1:1.58		0.615	1.159	0.713	-
2 549.5	40815	QPSK	F	20	18.5	17.77	-0.06	Right Cheek	0	50	0	1:1.58		0.452	1.183	0.535	-
2 636.5	41055	QPSK	F	20	18.5	17.77	0.03	Right Cheek	0	50	25	1:1.58		0.463	1.183	0.548	-
2 680	41490	QPSK	F	20	18.5	17.68	-0.04	Right Cheek	0	50	25	1:1.58		0.458	1.208	0.553	-
2 506	39750	QPSK	F	20	18.5	17.84	-0.06	Right Cheek	0	100	0	1:1.58		0.635	1.164	0.739	-
2 593	40620	QPSK	F	20	18.5	17.76	0.01	Right Tilt	0	1	0	1:1.58		0.526	1.186	0.624	-
2 506	39750	QPSK	F	20	18.5	17.75	-0.05	Right Tilt	0	1	0	1:1.58		0.613	1.189	0.729	-
2 549.5	40815	QPSK	F	20	18.5	17.66	-0.06	Right Tilt	0	1	0	1:1.58		0.455	1.213	0.552	-
2 636.5	41055	QPSK	F	20	18.5	17.64	-0.02	Right Tilt	0	1	49	1:1.58		0.482	1.219	0.588	-
2 680	41490	QPSK	F	20	18.5	17.61	-0.01	Right Tilt	0	1	49	1:1.58		0.560	1.227	0.687	-
2 593	40620	QPSK	F	20	18.5	17.88	-0.02	Right Tilt	0	50	0	1:1.58		0.536	1.153	0.618	-
2 506	39750	QPSK	F	20	18.5	17.86	-0.01	Right Tilt	0	50	49	1:1.58		0.719	1.159	**0.833**	A14
2 549.5	40815	QPSK	F	20	18.5	17.77	-0.05	Right Tilt	0	50	0	1:1.58		0.554	1.183	0.655	-
2 636.5	41055	QPSK	F	20	18.5	17.77	-0.06	Right Tilt	0	50	25	1:1.58		0.532	1.183	0.629	-
2 680	41490	QPSK	F	20	18.5	17.68	-0.07	Right Tilt	0	50	25	1:1.58		0.519	1.208	0.627	-
2 506	39750	QPSK	F	20	18.5	17.84	0.01	Right Tilt	0	100	0	1:1.58		0.682	1.164	0.794	-
2 506	39750	QPSK	F	20	20.1	19.58	-0.01	Right Tilt	0	50	49	1:2.31		0.674	1.127	0.760	**

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Note: ** Data entry indicate Power Class 2 Test Data.

LTE TDD Band 41 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
Up-link Carrier Aggregation Power class 3 (41C)																	
PCC	2 506	39750	QPSK	F	20	18.5	17.85	-0.03	Right Tilt	0	50	49	1:1.58		0.664	1.161	0.771	-
SCC	2 528.8	39948			20						50	0						
Up-link Carrier Aggregation Power class 2(HPUE) (41C)																	
PCC	2506	39750	QPSK	F	20	20.1	19.56	-0.11	Right Tilt	0	50	49	1:2.31		0.667	1.132	0.755	**
SCC	2 528.8	39948			20						50	0						
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram										

Note: ** Data entry indicate Power Class 2 Test Data.

LTE TDD Band 48 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
3 603.3	55773	QPSK	F	20	19.0	18.01	-0.06	Left Cheek	0	1	49	1:1.58		0.289	1.256	0.363	-
3 603.3	55773	QPSK	F	20	19.0	18.16	-0.02	Left Cheek	0	50	0	1:1.58		0.298	1.213	0.362	-
3 603.3	55773	QPSK	F	20	19.0	18.01	-0.18	Left Tilt	0	1	49	1:1.58		0.323	1.256	0.406	-
3 603.3	55773	QPSK	F	20	19.0	18.16	-0.02	Left Tilt	0	50	0	1:1.58		0.330	1.213	0.400	-
3 603.3	55773	QPSK	F	20	19.0	18.01	-0.07	Right Cheek	0	1	49	1:1.58		0.429	1.256	0.539	-
3 603.3	55773	QPSK	F	20	19.0	18.16	-0.04	Right Cheek	0	50	0	1:1.58		0.459	1.213	0.557	-
3 603.3	55773	QPSK	F	20	19.0	18.01	0.07	Right Tilt	0	1	49	1:1.58		0.560	1.256	0.703	-
3 560	55340	QPSK	F	20	19.0	17.95	0.08	Right Tilt	0	1	99	1:1.58		0.623	1.274	0.793	-
3 646.7	56207	QPSK	F	20	19.0	17.76	0.11	Right Tilt	0	1	0	1:1.58		0.540	1.330	0.718	-
3 690	56640	QPSK	F	20	19.0	17.88	0.16	Right Tilt	0	1	99	1:1.58		0.558	1.294	0.722	-
3 603.3	55773	QPSK	F	20	19.0	18.16	0.08	Right Tilt	0	50	0	1:1.58		0.567	1.213	0.688	-
3 560	55340	QPSK	F	20	19.0	18.11	0.08	Right Tilt	0	50	25	1:1.58		0.722	1.227	**0.886**	A15
3 646.7	56207	QPSK	F	20	19.0	17.94	0.16	Right Tilt	0	50	49	1:1.58		0.533	1.276	0.680	-
3 690	56640	QPSK	F	20	19.0	17.97	-0.12	Right Tilt	0	50	49	1:1.58		0.473	1.268	0.600	-
3 603.3	55773	QPSK	F	20	19.0	18.13	0.01	Right Tilt	0	100	0	1:1.58		0.492	1.222	0.601	-
3 560	55340	QPSK	F	20	19.0	18.07	0.13	Right Tilt	0	50	49	1:1.58		0.668	1.239	0.828	-
Up-link Carrier Aggregation (48C)																	
PCC	3 560	55340	QPSK	F	20	19.0	18.06	-0.14	Right Tilt	0	50	49	1:1.58		0.667	12.42	0.828	-
SCC	3 579.8	55538			20						50	0						
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram										

LTE FDD Band 66 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 745	132322	QPSK	A	20	24.5	23.63	0.18	Left Cheek	0	1	49	1:1	16	0.146	1.222	0.178	-
1 770	132572	QPSK	A	20	23.5	22.62	0.12	Left Cheek	0	50	49	1:1	16	0.101	1.225	0.124	-
1 745	132322	QPSK	A	20	24.5	23.63	0.03	Left Tilt	0	1	49	1:1	16	0.069	1.222	0.084	-
1 770	132572	QPSK	A	20	23.5	22.62	0.13	Left Tilt	0	50	49	1:1	16	0.042	1.225	0.051	-
1 745	132322	QPSK	A	20	24.5	23.63	0.19	Right Cheek	0	1	49	1:1	16	0.083	1.222	0.101	-
1 770	132572	QPSK	A	20	23.5	22.62	0.13	Right Cheek	0	50	49	1:1	16	0.068	1.225	0.083	-
1 745	132322	QPSK	A	20	24.5	23.63	0.10	Right Tilt	0	1	49	1:1	16	0.055	1.222	0.067	-
1 770	132572	QPSK	A	20	23.5	22.62	0.07	Right Tilt	0	50	49	1:1	16	0.046	1.225	0.056	-
1 715	132022	QPSK	A	10	24.5	23.34	0.17	Left Cheek	0	1	49	1:1	16	0.153	1.306	0.200	-
1 745	132322	QPSK	A	20	24.5	23.46	0.16	Left Cheek	0	1	99	1:1	16	0.136	1.271	0.173	-
Up-link Carrier Aggregation (66B)																	
PCC 1 715	132022	QPSK	A	10	24.5	23.53	0.11	Left Cheek	0	1	49	1:1	16	0.152	1.250	0.190	-
SCC 1 724.9	132121			10						1	0						
Up-link Carrier Aggregation (66C)																	
PCC 1 745	132322	QPSK	A	20	24.5	23.86	0.15	Left Cheek	0	1	99	1:1	16	0.144	1.159	0.167	-
SCC 1 764.8	132520			20						1	0						
1 720	132072	QPSK	F	20	19.0	18.07	-0.06	Left Cheek	0	1	99	1:1		0.617	1.239	0.764	-
1 720	132072	QPSK	F	20	19.0	17.99	0.00	Left Cheek	0	50	49	1:1		0.637	1.262	0.804	-
1 745	132322	QPSK	F	20	19.0	17.96	-0.00	Left Cheek	0	50	25	1:1		0.632	1.271	0.803	-
1 770	132572	QPSK	F	20	19.0	17.87	-0.01	Left Cheek	0	50	49	1:1		0.590	1.297	0.765	-
1 720	132072	QPSK	F	20	19.0	17.97	0.01	Left Cheek	0	100	0	1:1		0.639	1.268	0.810	-
1 720	132072	QPSK	F	20	19.0	18.07	0.07	Left Tilt	0	1	99	1:1		0.598	1.239	0.741	-
1 720	132072	QPSK	F	20	19.0	17.99	0.03	Left Tilt	0	50	49	1:1		0.617	1.262	0.779	-
1 720	132072	QPSK	F	20	19.0	18.07	-0.12	Right Cheek	0	1	99	1:1		0.725	1.239	0.898	-
1 745	132322	QPSK	F	20	19.0	17.87	0.03	Right Cheek	0	1	99	1:1		0.697	1.297	0.904	-
1 770	132572	QPSK	F	20	19.0	17.89	0.02	Right Cheek	0	1	99	1:1		0.697	1.291	0.900	-
1 720	132072	QPSK	F	20	19.0	17.99	0.07	Right Cheek	0	50	49	1:1		0.764	1.262	0.964	-
1 745	132322	QPSK	F	20	19.0	17.96	0.06	Right Cheek	0	50	25	1:1		0.757	1.271	0.962	-
1 770	132572	QPSK	F	20	19.0	17.87	0.04	Right Cheek	0	50	49	1:1		0.726	1.297	0.942	-
1 720	132072	QPSK	F	20	19.0	17.97	-0.01	Right Cheek	0	100	0	1:1		0.773	1.268	0.980	-
1 720	132072	QPSK	F	20	19.0	18.07	0.02	Right Tilt	0	1	99	1:1		0.752	1.239	0.932	-
1 745	132322	QPSK	F	20	19.0	17.87	-0.03	Right Tilt	0	1	99	1:1		0.728	1.297	0.944	-
1 770	132572	QPSK	F	20	19.0	17.89	-0.05	Right Tilt	0	1	99	1:1		0.709	1.291	0.915	-
1 720	132072	QPSK	F	20	19.0	17.99	0.03	Right Tilt	0	50	49	1:1		0.783	1.262	0.988	-
1 745	132322	QPSK	F	20	19.0	17.96	-0.01	Right Tilt	0	50	25	1:1		0.785	1.271	0.998	-
1 770	132572	QPSK	F	20	19.0	17.87	0.03	Right Tilt	0	50	49	1:1		0.756	1.297	0.981	-
1 720	132072	QPSK	F	20	19.0	17.97	-0.01	Right Tilt	0	100	0	1:1		0.791	1.268	1.003	-
1 775	132622	QPSK	F	10	19.0	17.79	-0.01	Right Tilt	0	1	0	1:1		**0.797**	1.321	**1.053**	A16

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LTE FDD Band 66 Head SAR

Frequency			Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz		Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
Up-link Carrier Aggregation (66B)																		
PCC	1 775	132622	QPSK	F	10	19.0	17.82	0.02	Right Tilt	0	1	0	1:1		0.728	1.312	0.955	-
SCC	1 765.1	132523	QPSK	F	10					0	1	49	1:1					
Up-link Carrier Aggregation (66C)																		
PCC	1 720	132072	QPSK	F	20	19.0	17.98	0.00	Right Tilt	0	1	0	1:1		0.792	1.265	1.002	-
SCC	1 739.8	132270	QPSK	F	20					0	1	99	1:1					

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

LTE FDD Band 71 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
680.5	133297	QPSK	A	20	25.0	23.67	-0.02	Left Cheek	0	1	0	1:1	0	0.070	1.358	0.095	-
680.5	133297	QPSK	A	20	24.0	22.75	0.13	Left Cheek	1	50	0	1:1	0	0.061	1.334	0.081	-
680.5	133297	QPSK	A	20	25.0	23.67	0.15	Left Tilt	0	1	0	1:1	0	0.047	1.358	0.064	-
680.5	133297	QPSK	A	20	24.0	22.75	0.04	Left Tilt	1	50	0	1:1	0	0.035	1.334	0.047	-
680.5	133297	QPSK	A	20	25.0	23.67	0.09	Right Cheek	0	1	0	1:1	0	0.084	1.358	0.114	-
680.5	133297	QPSK	A	20	24.0	22.75	-0.13	Right Cheek	1	50	0	1:1	0	0.028	1.334	0.037	-
680.5	133297	QPSK	A	20	25.0	23.67	-0.13	Right Tilt	0	1	0	1:1	0	0.028	1.358	0.038	-
680.5	133297	QPSK	A	20	24.0	22.75	0.12	Right Tilt	1	50	0	1:1	0	0.033	1.334	0.044	-
680.5	133297	QPSK	E	20	22.0	21.53	-0.19	Left Cheek	0	1	49	1:1		0.483	1.114	0.538	-
680.5	133297	QPSK	E	20	22.0	21.68	-0.14	Left Cheek	0	50	25	1:1		0.509	1.076	0.548	-
680.5	133297	QPSK	E	20	22.0	21.53	-0.14	Left Tilt	0	1	49	1:1		0.554	1.114	0.617	-
680.5	133297	QPSK	E	20	22.0	21.68	-0.10	Left Tilt	0	50	25	1:1		0.575	1.076	**0.619**	A17
680.5	133297	QPSK	E	20	22.0	21.53	-0.11	Right Cheek	0	1	49	1:1		0.365	1.114	0.407	-
680.5	133297	QPSK	E	20	22.0	21.68	-0.16	Right Cheek	0	50	25	1:1		0.376	1.076	0.405	-
680.5	133297	QPSK	E	20	22.0	21.53	-0.10	Right Tilt	0	1	49	1:1		0.326	1.114	0.363	-
680.5	133297	QPSK	E	20	22.0	21.68	-0.15	Right Tilt	0	50	25	1:1		0.339	1.076	0.365	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

NR FDD Band n7 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.30	-0.18	Left Cheek	0	1	214	1:1		0.250	1.175	0.294	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.25	-0.02	Left Cheek	0	108	54	1:1		0.242	1.189	0.288	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.30	0.17	Left Tilt	0	1	214	1:1		0.100	1.175	0.117	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.25	0.12	Left Tilt	0	108	54	1:1		0.098	1.189	0.116	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.30	-0.03	Right Cheek	0	1	214	1:1		0.122	1.175	0.143	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.25	0.06	Right Cheek	0	108	54	1:1		0.115	1.189	0.137	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.30	0.15	Right Tilt	0	1	214	1:1		0.067	1.175	0.079	-
2 535	507000	DFT-s OFDM QPSK	B	40	24.0	23.25	0.09	Right Tilt	0	108	54	1:1		0.067	1.189	0.080	-
2 535	507000	CP QPSK	B	40	22.5	21.60	-0.06	Left Cheek	1.5	1	1	1:1		0.175	1.230	0.215	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.78	-0.03	Left Cheek	0	1	214	1:1		0.311	1.324	0.412	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.82	-0.02	Left Cheek	0	108	0	1:1		0.361	1.312	0.474	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.78	0.07	Left Tilt	0	1	214	1:1		0.342	1.324	0.453	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.82	0.00	Left Tilt	0	108	0	1:1		0.396	1.312	0.520	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.78	-0.03	Right Cheek	0	1	214	1:1		0.630	1.324	0.834	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.82	0.10	Right Cheek	0	108	0	1:1		0.710	1.312	0.932	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.87	-0.17	Right Cheek	0	216	0	1:1		0.615	1.297	0.798	
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.78	-0.14	Right Tilt	0	1	214	1:1		0.714	1.324	0.946	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.82	-0.07	Right Tilt	0	108	0	1:1		0.766	1.312	1.005	-
2 535	507000	DFT-s OFDM QPSK	F	40	17.0	15.87	-0.15	Right Tilt	0	216	0	1:1		0.709	1.297	0.920	
2 535	507000	CP QPSK	F	40	17.0	15.93	0.07	Right Tilt	0	1	1	1:1		0.849	1.279	**1.086**	A18
2 535	507000	CP QPSK	F	40	17.0	15.93	-0.03	Right Tilt	0	1	1	1:1		0.844	1.279	1.079	*
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

NR FDD Band n12 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.12	Left Cheek	0	1	77	1:1	0	0.028	1.400	0.039	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	-0.17	Left Cheek	0	36	22	1:1	0	0.043	1.355	0.058	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	0.17	Left Tilt	0	1	77	1:1	0	0.013	1.400	0.018	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.14	Left Tilt	0	36	22	1:1	0	0.025	1.355	0.034	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.12	Right Cheek	0	1	77	1:1	0	0.023	1.400	0.032	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.17	Right Cheek	0	36	22	1:1	0	0.047	1.355	0.064	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	0.17	Right Tilt	0	1	77	1:1	0	0.0053	1.400	0.007	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.10	Right Tilt	0	36	22	1:1	0	0.023	1.355	0.031	-
707.5	141500	CP QPSK	A	15	23.5	22.09	-0.15	Right Cheek	1.5	1	1	1:1	0	0.017	1.384	0.024	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.10	Left Cheek	0	1	1	1:1		0.357	1.242	0.443	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.11	Left Cheek	0	36	43	1:1		0.367	1.242	0.456	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.04	Left Tilt	0	1	1	1:1		0.306	1.242	0.380	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.15	Left Tilt	0	36	43	1:1		0.458	1.242	**0.569**	A19
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.05	Right Cheek	0	1	1	1:1		0.236	1.242	0.293	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.11	Right Cheek	0	36	43	1:1		0.273	1.242	0.339	-
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.18	Right Tilt	0	1	1	1:1		0.209	1.242	0.260	
707.5	141500	DFT-s OFDM QPSK	E	15	22.0	21.06	-0.17	Right Tilt	0	36	43	1:1		0.223	1.242	0.277	-
707.5	141500	CP QPSK	E	15	22.0	21.32	-0.06	Left Tilt	0	1	1	1:1		0.211	1.169	0.247	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

NR FDD Band n25 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.27	-0.12	Left Cheek	0	1	1	1:1	0	0.129	1.327	0.171	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.45	-0.18	Left Cheek	0	108	54	1:1	0	0.116	1.274	0.148	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.27	0.14	Left Tilt	0	1	1	1:1	0	0.035	1.327	0.046	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.45	-0.00	Left Tilt	0	108	54	1:1	0	0.045	1.274	0.057	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.27	-0.17	Right Cheek	0	1	1	1:1	0	0.058	1.327	0.077	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.45	-0.18	Right Cheek	0	108	54	1:1	0	0.058	1.274	0.074	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.27	-0.17	Right Tilt	0	1	1	1:1	0	0.065	1.327	0.086	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	24.5	23.45	0.01	Right Tilt	0	108	54	1:1	0	0.064	1.274	0.082	-
1 882.5	376500	CP QPSK	A	40	23.0	21.74	-0.04	Left Cheek	1.5	1	1	1:1	0	0.086	1.337	0.115	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.32	-0.05	Left Cheek	0	1	108	1:1		0.417	1.169	0.487	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.48	-0.04	Left Cheek	0	108	108	1:1		0.405	1.127	0.456	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.32	0.05	Left Tilt	0	1	108	1:1		0.606	1.169	0.708	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.48	0.16	Left Tilt	0	108	108	1:1		0.511	1.127	0.576	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.32	-0.12	Right Cheek	0	1	108	1:1		0.664	1.169	0.776	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.48	-0.15	Right Cheek	0	108	108	1:1		0.615	1.127	0.693	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.24	-0.13	Right Cheek	0	216	0	1:1		0.707	1.191	0.842	
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.32	-0.03	Right Tilt	0	1	108	1:1		0.781	1.169	0.913	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.48	-0.02	Right Tilt	0	108	108	1:1		0.745	1.127	0.840	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	19.0	18.24	-0.01	Right Tilt	0	216	0	1:1		**0.789**	1.191	**0.940**	A20
1 882.5	376500	CP QPSK	F	40	19.0	18.41	0.09	Right Tilt	0	1	1	1:1		0.784	1.146	0.898	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

NR FDD Band n26 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.13	Left Cheek	0	1	1	1:1	0	0.039	1.340	0.052	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	-0.04	Left Cheek	0	50	28	1:1	0	0.041	1.390	0.057	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.14	Left Tilt	0	1	1	1:1	0	0.026	1.340	0.035	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.00	Left Tilt	0	50	28	1:1	0	0.019	1.390	0.026	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	-0.16	Right Cheek	0	1	1	1:1	0	0.061	1.340	0.082	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	-0.02	Right Cheek	0	50	28	1:1	0	0.055	1.390	0.076	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.12	Right Tilt	0	1	1	1:1	0	0.028	1.340	0.038	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.13	Right Tilt	0	50	28	1:1	0	0.026	1.390	0.036	-
831.5	166300	CP QPSK	A	20	23.5	22.21	-0.00	Right Cheek	1.5	1	1	1:1	0	0.043	1.346	0.058	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.12	-0.13	Left Cheek	0	1	1	1:1		0.705	1.225	0.863	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.03	-0.07	Left Cheek	0	50	0	1:1		0.638	1.250	0.798	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.08	-0.15	Left Cheek	0	100	0	1:1		0.630	1.236	0.779	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.12	-0.02	Left Tilt	0	1	1	1:1		0.691	1.225	0.846	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.03	-0.05	Left Tilt	0	50	0	1:1		0.618	1.250	0.773	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.08	-0.13	Left Tilt	0	100	0	1:1		0.596	1.236	0.737	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.12	-0.09	Right Cheek	0	1	1	1:1		0.501	1.225	0.614	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.03	-0.05	Right Cheek	0	50	0	1:1		0.500	1.250	0.625	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.12	-0.09	Right Tilt	0	1	1	1:1		0.445	1.225	0.545	-
831.5	166300	DFT-s OFDM QPSK	E	20	22.0	21.03	-0.12	Right Tilt	0	50	0	1:1		0.445	1.250	0.556	-
831.5	166300	CP QPSK	E	20	22.0	21.22	-0.14	Left Cheek	0	1	1	1:1		0.744	1.197	**0.890**	A21
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

NR FDD Band n30 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.49	0.00	Left Cheek	0	1	50	1:1		0.012	1.262	0.015	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.44	0.01	Left Cheek	0	25	14	1:1		0	1.276	0.000	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.49	0.10	Left Tilt	0	1	50	1:1		0.030	1.262	0.038	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.44	-0.02	Left Tilt	0	25	14	1:1		0.00907	1.276	0.012	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.49	0.00	Right Cheek	0	1	50	1:1		0.00589	1.262	0.007	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.44	0.00	Right Cheek	0	25	14	1:1		0.00956	1.276	0.012	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.49	0.10	Right Tilt	0	1	50	1:1		0.020	1.262	0.025	-
2 310	462000	DFT-s OFDM QPSK	A	10	23.5	22.44	-0.03	Right Tilt	0	25	14	1:1		0.031	1.276	0.040	-
2 310	462000	CP QPSK	A	10	22.0	20.88	-0.10	Right Tilt	0	1	1	1:1		0.017	1.294	0.022	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.04	0.01	Left Cheek	0	1	1	1:1		0.400	1.247	0.499	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.06	0.06	Left Cheek	0	25	27	1:1		0.376	1.242	0.467	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.04	0.01	Left Tilt	0	1	1	1:1		0.548	1.247	0.683	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.06	-0.07	Left Tilt	0	25	27	1:1		0.530	1.242	0.658	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.04	-0.16	Right Cheek	0	1	1	1:1		0.704	1.247	0.878	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.06	-0.09	Right Cheek	0	25	27	1:1		0.709	1.242	0.881	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	16.92	0.06	Right Cheek	0	50	0	1:1		0.752	1.282	0.964	
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.04	0.07	Right Tilt	0	1	1	1:1		0.717	1.247	0.894	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	17.06	0.10	Right Tilt	0	25	27	1:1		0.699	1.242	0.868	-
2 310	462000	DFT-s OFDM QPSK	F	10	18.0	16.92	0.04	Right Tilt	0	50	0	1:1		0.732	1.282	**0.938**	A22
2 310	462000	CP QPSK	F	10	18.0	17.31	-0.17	Right Tilt	0	1	1	1:1		0.713	1.172	0.836	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

NR TDD Band n41 Head SAR																		
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.93	-0.11	Left Cheek	0	1	1	1:1		0.172	1.016	0.175	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.69	0.00	Left Cheek	0	135	0	1:1		0.177	1.074	0.190	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.93	-0.01	Left Tilt	0	1	1	1:1		0.073	1.016	0.074	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.69	0.11	Left Tilt	0	135	0	1:1		0.058	1.074	0.062	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.93	0.10	Right Cheek	0	1	1	1:1		0.049	1.016	0.050	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.69	-0.13	Right Cheek	0	135	0	1:1		0.055	1.074	0.059	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.93	0.16	Right Tilt	0	1	1	1:1		0.042	1.016	0.043	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	25.0	24.69	0.01	Right Tilt	0	135	0	1:1		0.048	1.074	0.052	-
2 592.99	518598	CP QPSK	B	100	25.0	24.79	0.00	Left Cheek	0	1	1	1:1		0.062	1.050	0.065	-
2 592.99	518598	CW	B	100	23.0	22.51	0.10	Left Cheek	0	-	-	1:1		0.154	1.119	0.172	
2 592.99	518598	CW	B	100	23.0	22.51	0.11	Left Tilt	0	-	-	1:1		0.00948	1.119	0.011	
2 592.99	518598	CW	B	100	23.0	22.51	-0.04	Right Cheek	0	-	-	1:1		0.022	1.119	0.025	
2 592.99	518598	CW	B	100	23.0	22.51	0.10	Right Tilt	0	-	-	1:1		0.00844	1.119	0.009	
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.97	0.14	Left Cheek	0	1	1	1:1		0.697	1.007	0.702	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.17	Left Cheek	0	135	138	1:1		0.497	1.035	0.514	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.16	Left Cheek	0	270	0	1:1		0.570	1.035	0.590	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.97	0.10	Left Tilt	0	1	1	1:1		0.731	1.007	0.736	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	0.12	Left Tilt	0	135	138	1:1		0.517	1.035	0.535	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.01	Left Tilt		270	0	1:1		0.653	1.035	0.676	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.97	-0.12	Right Cheek	0	1	1	1:1		0.919	1.007	0.925	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.18	Right Cheek	0	135	138	1:1		0.785	1.035	0.812	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.11	Right Cheek	0	270	0	1:1		0.866	1.035	0.896	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.97	0.03	Right Tilt	0	1	1	1:1		0.980	1.007	0.987	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	0.08	Right Tilt	0	135	138	1:1		0.828	1.035	0.857	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.85	-0.05	Right Tilt	0	270	0	1:1		0.925	1.035	0.957	-
2 592.99	518598	CP QPSK	F	100	18.0	17.87	0.18	Right Tilt	0	1	1	1:1		0.936	1.030	0.964	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	18.0	17.97	0.02	Right Cheek	0	1	1	1:1		0.940	1.007	0.947	*
2 592.99	518598	CW	F	100	17.0	16.85	-0.12	Left Cheek	0	-	-	1:1		0.404	1.035	0.418	
2 592.99	518598	CW	F	100	17.0	16.85	-0.01	Left Tilt	0	-	-	1:1		0.573	1.035	0.593	
2 592.99	518598	CW	F	100	17.0	16.85	0.11	Right Cheek	0	-	-	1:1		0.952	1.035	0.985	
2 592.99	518598	CW	F	100	17.0	16.85	-0.18	Right Tilt	0	-	-	1:1		0.983	1.035	**1.018**	A23
2 592.99	518598	CW	F	100	17.0	16.85	0.04	Right Tilt	0	-	-	1:1		0.930	1.035	0.963	
2 592.99	518598	CW	D	100	20.0	19.47	0.00	Left Cheek	0	-	-	1:1		0	1.130	0.000	
2 592.99	518598	CW	D	100	20.0	19.47	0.00	Left Tilt	0	-	-	1:1		0	1.130	0.000	
2 592.99	518598	CW	D	100	20.0	19.47	0.00	Right Cheek	0	-	-	1:1		0	1.130	0.000	
2 592.99	518598	CW	D	100	20.0	19.47	0.00	Right Tilt	0	-	-	1:1		0	1.130	0.000	
2 592.99	518598	CW	E	100	17.5	17.20	-0.17	Left Cheek	0	-	-	1:1		0.566	1.072	0.606	
2 592.99	518598	CW	E	100	17.5	17.20	0.03	Left Tilt	0	-	-	1:1		0.514	1.072	0.551	
2 592.99	518598	CW	E	100	17.5	17.20	-0.02	Right Cheek	0	-	-	1:1		0.146	1.072	0.156	
2 592.99	518598	CW	E	100	17.5	17.20	0.08	Right Tilt	0	-	-	1:1		0.153	1.072	0.164	

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

Note: * Data entry indicate Variability measurement.

NR TDD Band n48 Head SAR																		
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.80	-0.16	Left Cheek	0	1	104	1:1		0.211	1.047	0.221	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.85	-0.16	Left Cheek	0	50	56	1:1		0.233	1.035	0.241	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.80	0.12	Left Tilt	0	1	104	1:1		0.234	1.047	0.245	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.85	-0.05	Left Tilt	0	50	56	1:1		0.263	1.035	0.272	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.80	-0.02	Right Cheek	0	1	104	1:1		0.397	1.047	0.416	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.85	0.11	Right Cheek	0	50	56	1:1		0.402	1.035	0.416	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.80	-0.07	Right Tilt	0	1	104	1:1		0.453	1.047	0.474	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	17.0	16.85	0.14	Right Tilt	0	50	56	1:1		0.464	1.035	0.480	-
3 680.01	645334	CP QPSK	F	40	17.0	16.60	0.07	Right Tilt	0	1	1	1:1		0.460	1.096	0.504	-
3 624.99	641666	CW	C	40	14.5	14.48	0.00	Left Cheek	0	-	-	1:1		0	1.005	0.000	-
3 624.99	641666	CW	C	40	14.5	14.48	0.01	Left Tilt	0	-	-	1:1		0.00632	1.005	0.006	-
3 624.99	641666	CW	C	40	14.5	14.48	0.00	Right Cheek	0	-	-	1:1		0	1.005	0.000	-
3 624.99	641666	CW	C	40	14.5	14.48	0.00	Right Tilt	0	-	-	1:1		0.00756	1.005	0.008	-
3 570	638000	CW	I	40	14.5	14.49	-0.17	Left Cheek	0	-	-	1:1		0.630	1.002	0.631	-
3 624.99	641666	CW	I	40	14.5	14.24	-0.17	Left Cheek	0	-	-	1:1		0.809	1.062	0.859	
3 680.01	645334	CW	I	40	14.5	14.07	0.13	Left Cheek	0	-	-	1:1		0.621	1.104	0.686	
3 570	638000	CW	I	40	14.5	14.49	0.17	Left Tilt	0	-	-	1:1		0.101	1.002	0.101	-
3 570	638000	CW	I	40	14.5	14.49	0.18	Right Cheek	0	-	-	1:1		0.935	1.002	**0.937**	A24
3 624.99	641666	CW	I	40	14.5	14.24	-0.17	Right Cheek	0	-	-	1:1		0.876	1.062	0.930	-
3 680.01	645334	CW	I	40	14.5	14.07	0.13	Right Cheek	0	-	-	1:1		0.715	1.104	0.789	-
3 570	638000	CW	I	40	14.5	14.49	0.08	Right Tilt	0	-	-	1:1		0.101	1.002	0.101	-
3 570	638000	CW	I	40	14.5	14.49	0.18	Right Cheek	0	-	-	1:1		0.931	1.002	0.933	*
3 680.01	645334	CW	D	40	14.5	13.72	0.00	Left Cheek	0	-	-	1:1		0	1.197	0.000	-
3 680.01	645334	CW	D	40	14.5	13.72	0.00	Left Tilt	0	-	-	1:1		0	1.197	0.000	-
3 680.01	645334	CW	D	40	14.5	13.72	0.00	Right Cheek	0	-	-	1:1		0	1.197	0.000	-
3 680.01	645334	CW	D	40	14.5	13.72	0.00	Right Tilt	0	-	-	1:1		0	1.197	0.000	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram										

Note: * Data entry indicate Variability measurement.

NR FDD Band n66 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.63	-0.07	Left Cheek	0	1	108	1:1	16	0.155	1.222	0.189	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.65	-0.09	Left Cheek	0	108	54	1:1	16	0.169	1.216	0.206	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.63	0.07	Left Tilt	0	1	108	1:1	16	0.061	1.222	0.075	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.65	0.14	Left Tilt	0	108	54	1:1	16	0.057	1.216	0.069	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.63	-0.19	Right Cheek	0	1	108	1:1	16	0.100	1.222	0.122	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.65	-0.03	Right Cheek	0	108	54	1:1	16	0.101	1.216	0.123	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.63	0.18	Right Tilt	0	1	108	1:1	16	0.067	1.222	0.082	-
1 745	349000	DFT-s OFDM QPSK	A	40	24.5	23.65	0.04	Right Tilt	0	108	54	1:1	16	0.066	1.216	0.080	-
1 745	349000	CP QPSK	A	40	23.0	21.92	-0.18	Left Cheek	1.5	1	1	1:1	16	0.117	1.282	0.150	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.37	-0.01	Left Cheek	0	1	108	1:1		0.436	1.156	0.504	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.43	-0.05	Left Cheek	0	108	0	1:1		0.379	1.140	0.432	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.37	0.04	Left Tilt	0	1	108	1:1		0.604	1.156	0.698	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.43	0.01	Left Tilt	0	108	0	1:1		0.522	1.140	0.595	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.37	-0.05	Right Cheek	0	1	108	1:1		0.753	1.156	0.871	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.43	-0.11	Right Cheek	0	108	0	1:1		0.838	1.140	0.956	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.34	0.15	Right Cheek	0	216	0	1:1		0.829	1.164	0.965	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.37	-0.07	Right Tilt	0	1	108	1:1		0.844	1.156	0.976	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.43	0.18	Right Tilt	0	108	0	1:1		0.898	1.140	1.024	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.34	0.04	Right Tilt	0	216	0	1:1		0.898	1.164	**1.045**	A25
1 745	349000	CP QPSK	F	40	18.0	17.19	0.02	Right Tilt	0	1	1	1:1		0.836	1.205	1.007	-
1 745	349000	DFT-s OFDM QPSK	F	40	18.0	17.34	0.18	Right Tilt	0	216	0	1:1		0.839	1.164	0.977	*
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

NR FDD Band n70 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.37	-0.17	Left Cheek	0	1	1	1:1	16	0.088	1.156	0.102	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.44	0.15	Left Cheek	0	36	22	1:1	16	0.100	1.138	0.114	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.37	-0.09	Left Tilt	0	1	1	1:1	16	0.039	1.156	0.045	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.44	0.12	Left Tilt	0	36	22	1:1	16	0.038	1.138	0.043	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.37	0.13	Right Cheek	0	1	1	1:1	16	0.055	1.156	0.064	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.44	0.00	Right Cheek	0	36	22	1:1	16	0.069	1.138	0.079	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.37	-0.17	Right Tilt	0	1	1	1:1	16	0.041	1.156	0.047	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	24.0	23.44	-0.15	Right Tilt	0	36	22	1:1	16	0.046	1.138	0.052	-
1 702.5	340500	CP QPSK	A	15	22.5	21.61	0.17	Left Cheek	1.5	1	1	1:1	16	0.073	1.227	0.090	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.84	-0.02	Left Cheek	0	1	1	1:1		0.495	1.164	0.576	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.89	0.01	Left Cheek	0	36	0	1:1		0.500	1.151	0.576	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.84	0.02	Left Tilt	0	1	1	1:1		0.718	1.164	0.836	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.89	-0.08	Left Tilt	0	36	0	1:1		0.674	1.151	0.776	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.87	-0.05	Left Tilt	0	75	0	1:1		0.674	1.156	0.779	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.84	-0.14	Right Cheek	0	1	1	1:1		0.819	1.164	0.953	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.89	-0.10	Right Cheek	0	36	0	1:1		0.841	1.151	0.968	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.87	-0.01	Right Cheek	0	75	0	1:1		0.838	1.156	0.969	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.84	-0.03	Right Tilt	0	1	1	1:1		0.928	1.164	1.080	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.89	-0.01	Right Tilt	0	36	0	1:1		0.923	1.151	1.062	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	18.5	17.87	0.06	Right Tilt	0	75	0	1:1		0.930	1.156	1.075	-
1 702.5	340500	CP QPSK	F	15	18.5	17.94	0.14	Right Tilt	0	1	1	1:1		0.953	1.138	**1.085**	A26
1 702.5	340500	CP QPSK	F	15	18.5	17.94	-0.00	Right Tilt	0	1	1	1:1		0.922	1.138	1.049	*
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

NR FDD Band n71 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	-0.12	Left Cheek	0	1	1	1:1	0	0.039	1.076	0.042	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.18	Left Cheek	0	50	28	1:1	0	0.054	1.094	0.059	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	-0.12	Left Tilt	0	1	1	1:1	0	0.019	1.076	0.020	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.19	Left Tilt	0	50	28	1:1	0	0.018	1.094	0.020	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	-0.10	Right Cheek	0	1	1	1:1	0	0.043	1.076	0.046	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	-0.19	Right Cheek	0	50	28	1:1	0	0.055	1.094	0.060	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	-0.11	Right Tilt	0	1	1	1:1	0	0.016	1.076	0.017	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.14	Right Tilt	0	50	28	1:1	0	0.016	1.094	0.018	-
680.5	136100	CP QPSK	A	20	23.5	23.24	-0.13	Right Cheek	1.5	1	1	1:1	0	0.027	1.062	0.029	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.61	-0.10	Left Cheek	0	1	53	1:1		0.626	1.094	0.685	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.50	-0.05	Left Cheek	0	50	0	1:1		0.768	1.122	0.862	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.55	-0.16	Left Cheek	0	100	0	1:1		0.792	1.109	**0.878**	A27
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.61	-0.10	Left Tilt	0	1	53	1:1		0.614	1.094	0.672	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.50	-0.11	Left Tilt	0	50	0	1:1		0.623	1.122	0.699	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.61	-0.08	Right Cheek	0	1	53	1:1		0.478	1.094	0.523	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.50	-0.11	Right Cheek	0	50	0	1:1		0.469	1.122	0.526	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.61	0.07	Right Tilt	0	1	53	1:1		0.418	1.094	0.457	-
680.5	136100	DFT-s OFDM QPSK	E	20	22.0	21.50	-0.10	Right Tilt	0	50	0	1:1		0.415	1.122	0.466	-
680.5	136100	CP QPSK	E	20	22.0	21.65	-0.10	Left Cheek	0	1	1	1:1		0.758	1.084	0.822	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

NR TDD Band n77 Head SAR																	
Frequency		Modulation	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.83	-0.12	Left Cheek	0	1	1	1:1		0.301	1.040	0.313	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.77	0.10	Left Cheek	0	135	0	1:1		0.286	1.054	0.302	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.83	0.10	Left Tilt	0	1	1	1:1		0.332	1.040	0.345	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.77	-0.19	Left Tilt	0	135	0	1:1		0.292	1.054	0.308	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.83	-0.18	Right Cheek	0	1	1	1:1		0.530	1.040	0.551	-
3 930	662000	DFT-s OFDM QPSK	F	100	17.0	16.75	-0.16	Right Cheek	0	1	1	1:1		0.569	1.059	0.603	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.77	-0.17	Right Cheek	0	135	0	1:1		0.534	1.054	0.563	-
3 930	662000	DFT-s OFDM QPSK	F	100	17.0	16.44	0.07	Right Cheek	0	135	138	1:1		0.661	1.138	0.752	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.60	-0.08	Right Cheek	0	270	0	1:1		0.588	1.096	0.645	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.83	0.10	Right Tilt	0	1	1	1:1		0.573	1.040	0.596	-
3 930	662000	DFT-s OFDM QPSK	F	100	17.0	16.75	0.13	Right Tilt	0	1	1	1:1		0.584	1.059	0.619	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.77	-0.03	Right Tilt	0	135	0	1:1		0.580	1.054	0.612	-
3 930	662000	DFT-s OFDM QPSK	F	100	17.0	16.44	0.09	Right Tilt	0	135	138	1:1		0.679	1.138	**0.772**	-
3 750	650000	DFT-s OFDM QPSK	F	100	17.0	16.60	0.19	Right Tilt	0	270	0	1:1		0.559	1.096	0.613	-
3 750	650000	CP OFDM QPSK	F	100	17.0	16.22	0.14	Right Tilt	0	1	1	1:1		0.609	1.197	0.729	-
3 500.01	633334	DFT-s OFDM QPSK	F	100	17.0	16.96	0.02	Right Tilt	0	1	1	1:1		0.746	1.009	0.753	-
3 750	650000	CW	C	100	15.5	14.84	0.00	Left Cheek	0	-	-	1:1		0.052	1.164	0.061	-
3 750	650000	CW	C	100	15.5	14.84	0.18	Left Tilt	0	-	-	1:1		0.019	1.164	0.022	-
3 750	650000	CW	C	100	15.5	14.84	-0.00	Right Cheek	0	-	-	1:1		0.017	1.164	0.020	-
3 750	650000	CW	C	100	15.5	14.84	0.13	Right Tilt	0	-	-	1:1		0.035	1.164	0.041	-
3 500.01	633334	CW	C	100	15.5	15.44	-0.12	Left Cheek	0	-	-	1:1		0.094	1.014	0.095	-
3 750	650000	CW	I	100	13.5	13.48	-0.16	Left Cheek	0	-	-	1:1		0.354	1.005	0.356	-
3 750	650000	CW	I	100	13.5	13.48	0.06	Left Tilt	0	-	-	1:1		0.043	1.005	0.043	-
3 750	650000	CW	I	100	13.5	13.48	-0.08	Right Cheek	0	-	-	1:1		0.662	1.005	0.625	-
3 930	662000	CW	I	100	13.5	13.42	0.04	Right Cheek	0	-	-	1:1		0.360	1.019	0.367	
3 750	650000	CW	I	100	13.5	13.48	0.12	Right Tilt	0	-	-	1:1		0.056	1.005	0.056	-
3 500.01	633334	CW	I	100	13.5	13.47	-0.13	Right Cheek	0	-	-	1:1		1.040	1.007	**1.047**	A28
3 500.01	633334	CW	I	100	13.5	13.47	-0.13	Right Cheek	0	-	-	1:1		0.962	1.007	0.969	*
3 750	650000	CW	D	100	15.5	15.10	0.00	Left Cheek	0	-	-	1:1		0.0000013	1.096	0.000	-
3 750	650000	CW	D	100	15.5	15.10	0.00	Left Tilt	0	-	-	1:1		0.00202	1.096	0.002	-
3 750	650000	CW	D	100	15.5	15.10	-0.00	Right Cheek	0	-	-	1:1		0.0000566	1.096	0.000	-
3 750	650000	CW	D	100	15.5	15.10	0.00	Right Tilt	0	-	-	1:1		0.00421	1.096	0.005	-
3 500.01	633334	CW	D	100	15.5	15.48	0.00	Right Tilt	0	-	-	1:1		0.00107	1.005	0.001	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

Note: * Data entry indicate Variability measurement.

DTS Head SAR																	
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																
2 462	11	802.11b	H	20	1	14.0	13.76	0.19	Left Cheek	WIFI1	99.0	0.164	0.051	1.057	1.010	0.061	-
2 462	11	802.11b	H	20	1	14.0	13.76	-0.16	Left Tilt	WIFI1	99.0	0.169	0.057	1.057	1.010	0.054	-
2 462	11	802.11b	H	20	1	14.0	13.76	0.06	Right Cheek	WIFI1	99.0	0.594	0.228	1.057	1.010	0.243	-
2 462	11	802.11b	H	20	1	14.0	13.76	0.07	Right Tilt	WIFI1	99.0	0.275	0.151	1.057	1.010	0.161	-
2 462	11	802.11b	J	20	1	14.0	13.54	0.00	Left Cheek	WIFI2	99.0	0.477	0.295	1.112	1.010	**0.331**	A29
2 462	11	802.11b	J	20	1	14.0	13.54	0.19	Left Tilt	WIFI2	99.0	0.0854	0.032	1.112	1.010	0.036	-
2 462	11	802.11b	J	20	1	14.0	13.54	-0.14	Right Cheek	WIFI2	99.0	0.296	0.183	1.112	1.010	0.205	-
2 462	11	802.11b	J	20	1	14.0	13.54	0.19	Right Tilt	WIFI2	99.0	0.045	0.000738	1.112	1.010	0.001	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram						

NII Head SAR																
Frequency		Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.		(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(W/kg)	(W/kg)		(Duty)	(W/kg)	
5 290	58	802.11ac	80	MCS0	13.0	12.97	-0.12	Left Cheek	WIFI1	85.7	0.178	0.074	1.007	1.167	0.087	-
5 290	58	802.11ac	80	MCS0	13.0	12.97	-0.04	Left Tilt	WIFI1	85.7	0.174	0.075	1.007	1.167	0.088	-
5 290	58	802.11ac	80	MCS0	13.0	12.97	0.15	Right Check	WIFI1	85.7	0.573	0.212	1.007	1.167	0.249	-
5 290	58	802.11ac	80	MCS0	13.0	12.97	-0.17	Right Tilt	WIFI1	85.7	0.486	0.197	1.007	1.167	0.231	-
5 690	138	802.11ac	80	MCS0	13.0	12.91	-0.00	Left Cheek	WIFI1	85.7	0.107	0.048	1.009	1.167	0.057	-
5 690	138	802.11ac	80	MCS0	13.0	12.91	-0.00	Left Tilt	WIFI1	85.7	0.220	0.047	1.009	1.167	0.056	-
5 690	138	802.11ac	80	MCS0	13.0	12.91	0.12	Right Check	WIFI1	85.7	0.979	0.452	1.009	1.167	0.539	-
5 690	138	802.11ac	80	MCS0	13.0	12.91	-0.12	Right Tilt	WIFI1	85.7	0.272	0.143	1.009	1.167	0.170	-
5 775	155	802.11ac	80	MCS0	13.0	12.99	-0.16	Left Cheek	WIFI1	85.7	0.398	0.059	1.002	1.167	0.069	-
5 775	155	802.11ac	80	MCS0	13.0	12.99	0.12	Left Tilt	WIFI1	85.7	0.158	0.055	1.002	1.167	0.064	-
5 775	155	802.11ac	80	MCS0	13.0	12.99	0.19	Right Check	WIFI1	85.7	1.54	0.501	1.002	1.167	0.586	-
5 775	155	802.11ac	80	MCS0	13.0	12.99	-0.16	Right Tilt	WIFI1	85.7	0.371	0.146	1.002	1.167	0.171	-
5 855	171	802.11ac	80	MCS0	13.0	12.95	0.00	Left Cheek	WIFI1	85.7	0.430	0.058	1.012	1.167	0.068	-
5 855	171	802.11ac	80	MCS0	13.0	12.95	-0.01	Left Tilt	WIFI1	85.7	0.221	0.054	1.012	1.167	0.064	-
5 855	171	802.11ac	80	MCS0	13.0	12.95	0.15	Right Check	WIFI1	85.7	1.560	0.501	1.012	1.167	**0.591**	A30
5 855	171	802.11ac	80	MCS0	13.0	12.95	0.14	Right Tilt	WIFI1	85.7	0.347	0.142	1.012	1.167	0.168	-
5 290	58	802.11ac	80	MCS0	13.0	11.03	-0.11	Left Cheek	WIFI2	85.7	0.299	0.134	1.574	1.167	0.246	-
5 290	58	802.11ac	80	MCS0	13.0	11.03	-0.08	Left Tilt	WIFI2	85.7	0.269	0.131	1.574	1.167	0.241	-
5 290	58	802.11ac	80	MCS0	13.0	11.03	-0.04	Right Check	WIFI2	85.7	0.132	0.048	1.574	1.167	0.088	-
5 290	58	802.11ac	80	MCS0	13.0	11.03	-0.10	Right Tilt	WIFI2	85.7	0.128	0.038	1.574	1.167	0.070	-
5 610	122	802.11ac	80	MCS0	13.0	12.85	-0.19	Left Cheek	WIFI2	85.7	0.185	0.080	1.035	1.167	0.097	-
5 610	122	802.11ac	80	MCS0	13.0	12.85	0.19	Left Tilt	WIFI2	85.7	0.101	0.052	1.035	1.167	0.063	-
5 610	122	802.11ac	80	MCS0	13.0	12.85	0.13	Right Check	WIFI2	85.7	0.0829	0.033	1.035	1.167	0.040	-
5 610	122	802.11ac	80	MCS0	13.0	12.85	0.17	Right Tilt	WIFI2	85.7	0.087	0.024	1.035	1.167	0.029	-
5 775	155	802.11ac	80	MCS0	13.0	12.80	0.10	Left Cheek	WIFI2	85.7	0.218	0.032	1.047	1.167	0.039	-
5 775	155	802.11ac	80	MCS0	13.0	12.80	0.19	Left Tilt	WIFI2	85.7	0.0922	0.026	1.047	1.167	0.032	-
5 775	155	802.11ac	80	MCS0	13.0	12.80	-0.17	Right Check	WIFI2	85.7	0.0234	0.00843	1.047	1.167	0.010	-
5 775	155	802.11ac	80	MCS0	13.0	12.80	0.15	Right Tilt	WIFI2	85.7	0.0311	0.00224	1.047	1.167	0.003	-
5 855	171	802.11ac	80	MCS0	13.0	12.27	-0.11	Left Cheek	WIFI2	85.7	0.137	0	1.183	1.167	0	-
5 855	171	802.11ac	80	MCS0	13.0	12.27	-0.05	Left Tilt	WIFI2	85.7	0.0811	0.015	1.183	1.167	0.021	-
5 855	171	802.11ac	80	MCS0	13.0	12.27	-0.15	Right Check	WIFI2	85.7	0.0932	0.017	1.183	1.167	0.023	-
5 855	171	802.11ac	80	MCS0	13.0	12.27	0.11	Right Tilt	WIFI2	85.7	0.115	0.016	1.183	1.167	0.022	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg Averaged over 1 gram

DSS Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
㎒	Ch.			(dBm)	(dBm)	(dB)			(W/kg)		(Duty)	(W/kg)	
2 441	39	Bluetooth DH5	H	19.0	18.46	0.13	Left Cheek	Ant.1	0.148	1.132	1.010	0.169	-
2 441	39	Bluetooth DH5	H	19.0	18.46	0.19	Left Tilt	Ant.1	0.117	1.132	1.010	0.134	-
2 441	39	Bluetooth DH5	H	19.0	18.46	-0.13	Right Cheek	Ant.1	0.536	1.132	1.010	**0.613**	A31
2 441	39	Bluetooth DH5	H	19.0	18.46	0.19	Right Tilt	Ant.1	0.311	1.132	1.010	0.356	-
2 441	39	Bluetooth DH5	J	20.0	19.44	0.12	Left Cheek	Ant.2	0.378	1.138	1.010	0.434	-
2 441	39	Bluetooth DH5	J	20.0	19.44	0.12	Left Tilt	Ant.2	0.036	1.138	1.010	0.041	-
2 441	39	Bluetooth DH5	J	20.0	19.44	-0.14	Right Cheek	Ant.2	0.193	1.138	1.010	0.222	-
2 441	39	Bluetooth DH5	J	20.0	19.44	0.01	Right Tilt	Ant.2	0.059	1.138	1.010	0.068	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

13.2 Body/Hotspot SAR Measurement Results

GSM 850 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)			(mm)		(W/kg)		(W/kg)	
836.6	190	GPRS 2Tx	E	32.5	31.64	-0.10	Rear	1:4.15	10		0.583	1.219	**0.711**	B1
836.6	190	GPRS 2Tx	E	32.5	31.64	-0.14	Front	1:4.15	10		0.447	1.219	0.545	-
836.6	190	GPRS 2Tx	E	32.5	31.64	-0.01	Right	1:4.15	10		0.355	1.219	0.433	-
836.6	190	GPRS 2Tx	E	32.5	31.64	0.11	Top	1:4.15	10		0.486	1.219	0.592	-
836.6	190	GSM	E	34.5	33.51	-0.00	Rear	1:8.3	10		0.132	1.256	0.166	-
836.6	190	GSM	E	34.5	33.51	-0.13	Front	1:8.3	10		0.086	1.256	0.108	-
836.6	190	GPRS 2Tx	A	32.5	32.09	-0.11	Rear	1:4.15	10		0.304	1.099	0.334	-
836.6	190	GPRS 2Tx	A	32.5	32.09	-0.03	Front	1:4.15	10		0.103	1.099	0.113	-
836.6	190	GPRS 2Tx	A	32.5	32.09	-0.01	Left	1:4.15	10		0.018	1.099	0.020	-
836.6	190	GPRS 2Tx	A	32.5	32.09	-0.15	Right	1:4.15	10		0.069	1.099	0.076	-
836.6	190	GPRS 2Tx	A	32.5	32.09	0.13	Bottom	1:4.15	10		0.106	1.099	0.116	-
836.6	190	GSM	A	34.5	33.31	-0.19	Rear	1:8.3	10		0.200	1.315	0.263	-
836.6	190	GSM	A	34.5	33.31	-0.16	Front	1:8.3	10		0.087	1.315	0.114	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

GSM 1900 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)			(mm)		(W/kg)		(W/kg)	
1 880	661	GPRS 4Tx	A	23.0	21.92	0.12	Rear	1:2.07	10		0.454	1.282	0.582	-
1 880	661	GPRS 4Tx	A	23.0	21.92	-0.09	Front	1:2.07	10		0.373	1.282	0.478	-
1 880	661	GPRS 4Tx	A	23.0	21.92	0.19	Left	1:2.07	10		0.043	1.282	0.055	-
1 880	661	GPRS 4Tx	A	23.0	21.92	-0.10	Right	1:2.07	10		0.052	1.282	0.067	-
1 880	661	GPRS 4Tx	A	23.0	21.92	0.14	Bottom	1:2.07	10		0.860	1.282	**1.103**	B2
1 850.2	512	GPRS 4Tx	A	23.0	21.46	0.10	Bottom	1:2.07	10		0.610	1.426	0.870	-
1 909.8	810	GPRS 4Tx	A	23.0	20.51	0.07	Bottom	1:2.07	10		0.577	1.774	1.024	-
1 880	661	GPRS 4Tx	A	23.0	21.92	0.09	Bottom	1:2.07	10		0.825	1.282	1.058	*
1 880	661	GSM	A	29.0	27.70	0.19	Rear	1:8.3	10		0.536	1.349	0.723	-
1 880	661	GSM	A	29.0	27.70	-0.11	Front	1:8.3	10		0.459	1.349	0.619	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

Note: * Data entry indicate Variability measurement.

UMTS Band 5 Body/Hotspot SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)			(mm)		(W/kg)		(W/kg)	
836.6	4183	RMC	E	25.5	24.92	0.00	Rear	1:1	10		0.315	1.143	**0.360**	B3
836.6	4183	RMC	E	25.5	24.92	-0.18	Front	1:1	10		0.228	1.143	0.261	-
836.6	4183	RMC	E	25.5	24.92	0.05	Right	1:1	10		0.233	1.143	0.266	-
836.6	4183	RMC	E	25.5	24.92	0.11	Top	1:1	10		0.283	1.143	0.323	-
836.6	4183	RMC	A	25.5	24.31	-0.15	Rear	1:1	10	127	0.252	1.315	0.331	-
836.6	4183	RMC	A	25.5	24.31	-0.17	Front	1:1	10	127	0.144	1.315	0.189	-
836.6	4183	RMC	A	25.5	24.31	-0.17	Left	1:1	10	127	0.021	1.315	0.028	-
836.6	4183	RMC	A	25.5	24.31	-0.10	Right	1:1	10	127	0.075	1.315	0.099	-
836.6	4183	RMC	A	25.5	24.31	-0.19	Bottom	1:1	10	127	0.127	1.315	0.167	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

UMTS Band 4 Body/Hotspot SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)			(mm)		(W/kg)		(W/kg)	
1 732.4	1412	RMC	A	20	19.38	-0.13	Rear	1:1	10	121	0.575	1.153	0.663	-
1 732.4	1412	RMC	A	20	19.38	0.17	Front	1:1	10	121	0.433	1.153	0.499	-
1 732.4	1412	RMC	A	20	19.38	0.12	Left	1:1	10	121	0.058	1.153	0.067	-
1 732.4	1412	RMC	A	20	19.38	-0.10	Right	1:1	10	121	0.083	1.153	0.096	-
1 732.4	1412	RMC	A	20	19.38	0.14	Bottom	1:1	10	121	0.989	1.153	1.140	-
1 712.4	1312	RMC	A	20	19.15	0.12	Bottom	1:1	10	121	0.938	1.216	**1.141**	B4
1 752.6	1513	RMC	A	20	19.47	0.01	Bottom	1:1	10	121	0.990	1.130	1.119	-
1 752.6	1513	RMC	A	20	19.47	0.04	Bottom	1:1	10	121	0.992	1.130	1.121	*
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

Note: * Data entry indicate Variability measurement.

UMTS Band 2 Body/Hotspot SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dB)	(dB)	(dB)			(mm)		(W/kg)		(W/kg)	
1 880	9400	RMC	A	19.5	18.70	-0.01	Rear	1:1	10	138	0.351	1.202	0.422	-
1 880	9400	RMC	A	19.5	18.70	0.15	Front	1:1	10	138	0.257	1.202	0.309	-
1 880	9400	RMC	A	19.5	18.70	0.08	Left	1:1	10	138	0.040	1.202	0.048	-
1 880	9400	RMC	A	19.5	18.70	-0.13	Right	1:1	10	138	0.045	1.202	0.054	-
1 880	9400	RMC	A	19.5	18.70	0.05	Bottom	1:1	10	138	**0.777**	1.202	0.934	-
1 852.4	9262	RMC	A	19.5	18.55	0.07	Bottom	1:1	10	138	0.767	1.245	**0.955**	B5
1 907.6	9538	RMC	A	19.5	18.77	0.09	Bottom	1:1	10	138	0.700	1.183	0.828	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

LTE FDD Band 7 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 560	21350	QPSK	B	20	21.0	20.30	-0.01	Rear	0	1	49	1:1		10	0.435	1.175	0.511	-
2 560	21350	QPSK	B	20	21.0	20.34	-0.12	Rear	0	50	49	1:1		10	0.439	1.164	0.511	-
2 560	21350	QPSK	B	20	21.0	20.30	-0.19	Front	0	1	49	1:1		10	0.218	1.175	0.256	-
2 560	21350	QPSK	B	20	21.0	20.34	0.10	Front	0	50	49	1:1		10	0.225	1.164	0.262	-
2 560	21350	QPSK	B	20	21.0	20.30	-0.04	Left	0	1	49	1:1		10	0.405	1.175	0.476	-
2 560	21350	QPSK	B	20	21.0	20.34	-0.03	Left	0	50	49	1:1		10	0.417	1.164	0.485	-
2 560	21350	QPSK	B	20	21.0	20.30	-0.04	Bottom	0	1	49	1:1		10	0.372	1.175	0.437	-
2 560	21350	QPSK	B	20	21.0	20.34	-0.01	Bottom	0	50	49	1:1		10	0.384	1.164	0.447	-
2 510	20850	QPSK	F	20	20.5	19.53	-0.12	Rear	0	1	0	1:1		10	0.375	1.250	0.469	-
2 510	20850	QPSK	F	20	20.5	19.66	0.08	Rear	0	50	0	1:1		10	0.385	1.213	0.467	-
2 510	20850	QPSK	F	20	20.5	19.53	0.09	Front	0	1	0	1:1		10	0.358	1.250	0.448	-
2 510	20850	QPSK	F	20	20.5	19.66	-0.15	Front	0	50	0	1:1		10	0.354	1.213	0.429	-
2 510	20850	QPSK	F	20	20.5	19.53	-0.08	Left	0	1	0	1:1		10	0.044	1.250	0.055	-
2 510	20850	QPSK	F	20	20.5	19.66	0.11	Left	0	50	0	1:1		10	0.048	1.213	0.058	-
2 510	20850	QPSK	F	20	20.5	19.53	-0.10	Top	0	1	0	1:1		10	0.520	1.250	**0.650**	B6
2 510	20850	QPSK	F	20	20.5	19.66	-0.12	Top	0	50	0	1:1		10	0.529	1.213	0.642	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE FDD Band 12 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
707.5	23095	QPSK	A	10	25.0	24.37	0.02	Rear	0	1	24	1:1	0	10	**0.259**	1.156	**0.299**	B7
707.5	23095	QPSK	A	10	24.0	22.99	-0.05	Rear	1	25	0	1:1	0	10	0.212	1.262	0.268	-
707.5	23095	QPSK	A	10	25.0	24.37	-0.00	Front	0	1	24	1:1	0	10	0.168	1.156	0.194	-
707.5	23095	QPSK	A	10	24.0	22.99	-0.01	Front	1	25	0	1:1	0	10	0.136	1.262	0.172	-
707.5	23095	QPSK	A	10	25.0	24.37	-0.10	Left	0	1	24	1:1	0	10	0.087	1.156	0.101	-
707.5	23095	QPSK	A	10	24.0	22.99	-0.04	Left	1	25	0	1:1	0	10	0.073	1.262	0.092	-
707.5	23095	QPSK	A	10	25.0	24.37	0.06	Right	0	1	24	1:1	0	10	0.143	1.156	0.165	-
707.5	23095	QPSK	A	10	24.0	22.99	-0.03	Right	1	25	0	1:1	0	10	0.115	1.262	0.145	-
707.5	23095	QPSK	A	10	25.0	24.37	0.11	Bottom	0	1	24	1:1	0	10	0.114	1.156	0.132	
707.5	23095	QPSK	A	10	24.0	22.99	0.01	Bottom	1	25	0	1:1	0	10	0.089	1.262	0.112	
707.5	23095	QPSK	E	10	25.0	24.52	-0.10	Rear	0	1	49	1:1		10	0.260	1.117	0.290	-
707.5	23095	QPSK	E	10	24.0	23.67	0.05	Rear	1	25	12	1:1		10	0.203	1.079	0.219	-
707.5	23095	QPSK	E	10	25.0	24.52	-0.06	Front	0	1	49	1:1		10	0.221	1.117	0.247	-
707.5	23095	QPSK	E	10	24.0	23.67	-0.11	Front	1	25	12	1:1		10	0.169	1.079	0.182	-
707.5	23095	QPSK	E	10	25.0	24.52	0.17	Right	0	1	49	1:1		10	0.171	1.117	0.191	-
707.5	23095	QPSK	E	10	24.0	23.67	0.04	Right	1	25	12	1:1		10	0.124	1.079	0.134	-
707.5	23095	QPSK	E	10	25.0	24.52	-0.04	Top	0	1	49	1:1		10	0.220	1.117	0.246	-
707.5	23095	QPSK	E	10	24.0	23.67	0.12	Top	1	25	12	1:1		10	0.174	1.079	0.188	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE FDD Band 13 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
782	23230	QPSK	A	10	25.0	23.98	-0.10	Rear	0	1	0	1:1	0	10	0.264	1.265	0.334	-
782	23230	QPSK	A	10	24.0	23.05	0.01	Rear	1	25	0	1:1	0	10	0.240	1.245	0.299	-
782	23230	QPSK	A	10	25.0	23.98	-0.11	Front	0	1	0	1:1	0	10	0.128	1.265	0.162	-
782	23230	QPSK	A	10	24.0	23.05	-0.11	Front	1	25	0	1:1	0	10	0.117	1.245	0.146	-
782	23230	QPSK	A	10	25.0	23.98	-0.03	Left	0	1	0	1:1	0	10	0.066	1.265	0.083	-
782	23230	QPSK	A	10	24.0	23.05	-0.09	Left	1	25	0	1:1	0	10	0.052	1.245	0.065	-
782	23230	QPSK	A	10	25.0	23.98	-0.02	Right	0	1	0	1:1	0	10	0.134	1.265	0.169	-
782	23230	QPSK	A	10	24.0	23.05	-0.00	Right	1	25	0	1:1	0	10	0.102	1.245	0.127	-
782	23230	QPSK	A	10	25.0	23.98	-0.11	Bottom	0	1	0	1:1	0	10	0.082	1.265	0.104	
782	23230	QPSK	A	10	24.0	23.05	-0.14	Bottom	1	25	0	1:1	0	10	0.083	1.245	0.103	
782	23230	QPSK	E	10	25.0	24.40	-0.14	Rear	0	1	49	1:1		10	0.291	1.148	0.334	-
782	23230	QPSK	E	10	24.0	23.15	0.08	Rear	1	25	0	1:1		10	**0.296**	1.216	**0.360**	B8
782	23230	QPSK	E	10	25.0	24.40	-0.11	Front	0	1	49	1:1		10	0.215	1.148	0.247	-
782	23230	QPSK	E	10	24.0	23.15	-0.17	Front	1	25	0	1:1		10	0.260	1.216	0.316	-
782	23230	QPSK	E	10	25.0	24.40	-0.11	Right	0	1	49	1:1		10	0.219	1.148	0.251	-
782	23230	QPSK	E	10	24.0	23.15	-0.05	Right	1	25	0	1:1		10	0.267	1.216	0.325	-
782	23230	QPSK	E	10	25.0	24.40	-0.08	Top	0	1	49	1:1		10	0.196	1.148	0.225	-
782	23230	QPSK	E	10	24.0	23.15	0.09	Top	1	25	0	1:1		10	0.258	1.216	0.314	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE FDD Band 14 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
793	23330	QPSK	A	10	25.0	24.08	-0.11	Rear	0	1	0	1:1	0	10	0.232	1.236	0.287	-
793	23330	QPSK	A	10	24.0	22.83	-0.13	Rear	1	25	0	1:1	0	10	0.221	1.309	0.289	-
793	23330	QPSK	A	10	25.0	24.08	-0.06	Front	0	1	0	1:1	0	10	0.108	1.236	0.133	-
793	23330	QPSK	A	10	24.0	22.83	0.12	Front	1	25	0	1:1	0	10	0.092	1.309	0.120	-
793	23330	QPSK	A	10	25.0	24.08	-0.04	Left	0	1	0	1:1	0	10	0.031	1.236	0.038	-
793	23330	QPSK	A	10	24.0	22.83	-0.15	Left	1	25	0	1:1	0	10	0.028	1.309	0.037	-
793	23330	QPSK	A	10	25.0	24.08	-0.02	Right	0	1	0	1:1	0	10	0.054	1.236	0.067	-
793	23330	QPSK	A	10	24.0	22.83	0.15	Right	1	25	0	1:1	0	10	0.060	1.309	0.079	-
793	23330	QPSK	A	10	25.0	24.08	0.00	Bottom	0	1	0	1:1	0	10	0.085	1.236	0.105	
793	23330	QPSK	A	10	24.0	22.83	-0.10	Bottom	1	25	0	1:1	0	10	0.080	1.309	0.105	
782	23230	QPSK	E	10	25.0	24.81	0.05	Rear	0	1	24	1:1		10	0.595	1.045	0.622	-
782	23230	QPSK	E	10	24.0	23.65	0.07	Rear	1	25	12	1:1		10	0.472	1.084	0.512	-
782	23230	QPSK	E	10	25.0	24.81	-0.08	Front	0	1	24	1:1		10	0.568	1.045	0.593	-
782	23230	QPSK	E	10	24.0	23.65	-0.04	Front	1	25	12	1:1		10	0.449	1.084	0.487	-
782	23230	QPSK	E	10	25.0	24.81	0.00	Right	0	1	24	1:1		10	0.550	1.045	0.575	-
782	23230	QPSK	E	10	24.0	23.65	0.03	Right	1	25	12	1:1		10	0.436	1.084	0.473	-
782	23230	QPSK	E	10	25.0	24.81	0.09	Top	0	1	24	1:1		10	**0.609**	1.045	**0.636**	B9
782	23230	QPSK	E	10	24.0	23.65	0.12	Top	1	25	12	1:1		10	0.486	1.084	0.527	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE FDD Band 25 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 882.5	26365	QPSK	A	20	19.0	18.17	0.14	Rear	0	1	0	1:1	0	10	0.319	1.211	0.386	-
1 882.5	26365	QPSK	A	20	19.0	17.96	0.11	Rear	0	50	49	1:1	0	10	0.313	1.271	0.398	-
1 882.5	26365	QPSK	A	20	19.0	18.17	0.14	Front	0	1	0	1:1	0	10	0.259	1.211	0.314	-
1 882.5	26365	QPSK	A	20	19.0	17.96	0.18	Front	0	50	49	1:1	0	10	0.250	1.271	0.318	-
1 882.5	26365	QPSK	A	20	19.0	18.17	0.19	Left	0	1	0	1:1	0	10	0.027	1.211	0.033	-
1 882.5	26365	QPSK	A	20	19.0	17.96	-0.11	Left	0	50	49	1:1	0	10	0.024	1.271	0.031	-
1 882.5	26365	QPSK	A	20	19.0	18.17	0.10	Right	0	1	0	1:1	0	10	0.047	1.211	0.057	-
1 882.5	26365	QPSK	A	20	19.0	17.96	0.13	Right	0	50	49	1:1	0	10	0.047	1.271	0.060	-
1 882.5	26365	QPSK	A	20	19.0	18.17	-0.12	Bottom	0	1	0	1:1	0	10	0.623	1.211	0.754	-
1 882.5	26365	QPSK	A	20	19.0	17.96	-0.11	Bottom	0	50	49	1:1	0	10	0.630	1.271	0.801	-
1 860	26140	QPSK	A	20	19.0	17.88	-0.19	Bottom	0	50	49	1:1	0	10	0.615	1.294	0.796	-
1 905	26590	QPSK	A	20	19.0	17.85	-0.18	Bottom	0	50	49	1:1	0	10	0.553	1.303	0.721	-
1 882.5	26365	QPSK	A	20	19.0	17.84	-0.10	Bottom	0	100	0	1:1	0	10	0.623	1.306	**0.814**	B10
1 882.5	26365	QPSK	F	20	21.0	20.03	0.16	Rear	0	1	49	1:1		10	0.306	1.250	0.383	-
1 882.5	26365	QPSK	F	20	21.0	20.09	0.16	Rear	0	50	0	1:1		10	0.309	1.233	0.381	-
1 882.5	26365	QPSK	F	20	21.0	20.03	0.14	Front	0	1	49	1:1		10	0.200	1.250	0.250	-
1 882.5	26365	QPSK	F	20	21.0	20.09	0.14	Front	0	50	0	1:1		10	0.197	1.233	0.243	-
1 882.5	26365	QPSK	F	20	21.0	20.03	0.14	Left	0	1	49	1:1		10	0.097	1.250	0.121	-
1 882.5	26365	QPSK	F	20	21.0	20.09	0.19	Left	0	50	0	1:1		10	0.096	1.233	0.118	-
1 882.5	26365	QPSK	F	20	21.0	20.03	-0.04	Top	0	1	49	1:1		10	0.528	1.250	0.660	-
1 882.5	26365	QPSK	F	20	21.0	20.09	-0.00	Top	0	50	0	1:1		10	0.547	1.233	0.674	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE FDD Band 26 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
831.5	26865	QPSK	A	15	25.0	24.24	0.13	Rear	0	1	0	1:1	0	10	0.333	1.191	0.397	-
831.5	26865	QPSK	A	15	24.0	22.74	0.16	Rear	1	36	18	1:1	0	10	**0.376**	1.337	**0.503**	B11
831.5	26865	QPSK	A	15	25.0	24.24	-0.02	Front	0	1	0	1:1	0	10	0.249	1.191	0.297	-
831.5	26865	QPSK	A	15	24.0	22.74	0.13	Front	1	36	18	1:1	0	10	0.243	1.337	0.325	-
831.5	26865	QPSK	A	15	25.0	24.24	-0.12	Left	0	1	0	1:1	0	10	0.050	1.191	0.060	-
831.5	26865	QPSK	A	15	24.0	22.74	0.10	Left	1	36	18	1:1	0	10	0.044	1.337	0.059	-
831.5	26865	QPSK	A	15	25.0	24.24	0.03	Right	0	1	0	1:1	0	10	0.119	1.191	0.142	-
831.5	26865	QPSK	A	15	24.0	22.74	-0.13	Right	1	36	18	1:1	0	10	0.116	1.337	0.155	-
831.5	26865	QPSK	A	15	25.0	24.24	0.18	Bottom	0	1	0	1:1	0	10	0.157	1.191	0.187	
831.5	26865	QPSK	A	15	24.0	22.74	-0.02	Bottom	1	36	18	1:1	0	10	0.153	1.337	0.204	
831.5	26865	QPSK	E	15	25.0	24.36	0.14	Rear	0	1	0	1:1		10	0.091	1.159	0.105	-
831.5	26865	QPSK	E	15	24.0	23.44	0.14	Rear	1	36	0	1:1		10	0.141	1.138	0.160	-
831.5	26865	QPSK	E	15	25.0	24.36	0.13	Front	0	1	0	1:1		10	0.121	1.159	0.140	-
831.5	26865	QPSK	E	15	24.0	23.44	-0.17	Front	1	36	0	1:1		10	0.092	1.138	0.105	-
831.5	26865	QPSK	E	15	25.0	24.36	0.12	Right	0	1	0	1:1		10	0.130	1.159	0.151	-
831.5	26865	QPSK	E	15	24.0	23.44	0.14	Right	1	36	0	1:1		10	0.107	1.138	0.122	-
831.5	26865	QPSK	E	15	25.0	24.36	0.15	Top	0	1	0	1:1		10	0.144	1.159	0.167	-
831.5	26865	QPSK	E	15	24.0	23.44	0.19	Top	1	36	0	1:1		10	0.125	1.138	0.142	-

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE FDD Band 30 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 310	27710	QPSK	A	10	20.0	19.14	0.01	Rear	0	1	0	1:1		10	0.203	1.219	0.247	-
2 310	27710	QPSK	A	10	20.0	18.95	0.16	Rear	0	25	0	1:1		10	0.195	1.274	0.248	-
2 310	27710	QPSK	A	10	20.0	19.14	0.18	Front	0	1	0	1:1		10	0.215	1.219	0.262	-
2 310	27710	QPSK	A	10	20.0	18.95	0.16	Front	0	25	0	1:1		10	0.210	1.274	0.268	-
2 310	27710	QPSK	A	10	20.0	19.14	0.14	Left	0	1	0	1:1		10	0.00516	1.219	0.006	-
2 310	27710	QPSK	A	10	20.0	18.95	0.18	Left	0	25	0	1:1		10	0.00194	1.274	0.002	-
2 310	27710	QPSK	A	10	20.0	19.14	0.18	Right	0	1	0	1:1		10	0.011	1.219	0.013	-
2 310	27710	QPSK	A	10	20.0	18.95	0.14	Right	0	25	0	1:1		10	0.010	1.274	0.013	-
2 310	27710	QPSK	A	10	20.0	19.14	-0.05	Bottom	0	1	0	1:1		10	0.360	1.219	0.439	-
2 310	27710	QPSK	A	10	20.0	18.95	-0.03	Bottom	0	25	0	1:1		10	0.352	1.274	0.448	-
2 310	27710	QPSK	F	10	21.0	20.05	0.16	Rear	0	1	24	1:1		10	0.503	1.245	0.626	-
2 310	27710	QPSK	F	10	21.0	19.94	0.16	Rear	0	25	0	1:1		10	0.498	1.276	0.635	-
2 310	27710	QPSK	F	10	21.0	20.05	0.17	Front	0	1	24	1:1		10	0.314	1.245	0.391	-
2 310	27710	QPSK	F	10	21.0	19.94	0.13	Front	0	25	0	1:1		10	0.313	1.276	0.399	-
2 310	27710	QPSK	F	10	21.0	20.05	0.15	Left	0	1	24	1:1		10	0.044	1.245	0.055	-
2 310	27710	QPSK	F	10	21.0	19.94	0.11	Left	0	25	0	1:1		10	0.042	1.276	0.054	-
2 310	27710	QPSK	F	10	21.0	20.05	-0.06	Top	0	1	24	1:1		10	0.615	1.245	0.766	-
2 310	27710	QPSK	F	10	21.0	19.94	-0.02	Top	0	25	0	1:1		10	0.612	1.276	**0.781**	B12

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

LTE TDD Band 38 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 595	38000	QPSK	F	20	22.0	21.32	0.10	Rear	0	1	49	1:1.58		10	0.298	1.169	0.349	-
2 610	38150	QPSK	F	20	22.0	21.40	0.05	Rear	0	50	0	1:1.58		10	0.299	1.148	0.343	-
2 595	38000	QPSK	F	20	22.0	21.32	0.15	Front	0	1	49	1:1.58		10	0.220	1.169	0.257	-
2 610	38150	QPSK	F	20	22.0	21.40	0.02	Front	0	50	0	1:1.58		10	0.205	1.148	0.235	-
2 595	38000	QPSK	F	20	22.0	21.32	0.04	Left	0	1	49	1:1.58		10	0.044	1.169	0.051	-
2 610	38150	QPSK	F	20	22.0	21.40	0.08	Left	0	50	0	1:1.58		10	0.045	1.148	0.052	-
2 595	38000	QPSK	F	20	22.0	21.32	-0.05	Top	0	1	49	1:1.58		10	0.386	1.169	**0.451**	B13
2 610	38150	QPSK	F	20	22.0	21.40	-0.18	Top	0	50	0	1:1.58		10	0.392	1.148	0.450	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

LTE TDD Band 41 Hotspot SAR

Component CA	Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
	MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
	2 593	40620	QPSK	B	20	23.0	22.49	-0.16	Rear	0	1	0	1:1.58		10	0.389	1.125	**0.438**	B14
	2 593	40620	QPSK	B	20	23.0	22.58	-0.16	Rear	0	50	0	1:1.58		10	0.278	1.102	0.306	-
	2 593	40620	QPSK	B	20	23.0	22.49	0.16	Front	0	1	0	1:1.58		10	0.259	1.125	0.291	-
	2 593	40620	QPSK	B	20	23.0	22.58	0.16	Front	0	50	0	1:1.58		10	0.266	1.102	0.293	-
	2 593	40620	QPSK	B	20	23.0	22.49	-0.01	Left	0	1	0	1:1.58		10	0.251	1.125	0.282	-
	2 593	40620	QPSK	B	20	23.0	22.58	-0.01	Left	0	50	0	1:1.58		10	0.256	1.102	0.282	-
	2 593	40620	QPSK	B	20	23.0	22.49	-0.01	Bottom	0	1	0	1:1.58		10	0.249	1.125	0.280	-
	2 593	40620	QPSK	B	20	23.0	22.58	-0.05	Bottom	0	50	0	1:1.58		10	0.258	1.102	0.284	-
	2 593	40620	QPSK	B	20	24.6	24.00	-0.16	Rear	0	1	0	1:2.31		10	0.322	1.148	0.370	**
Up-link Carrier Aggregation Power class 3 (41C)																			
PCC	2 593	40620	QPSK	B	20	23.0	22.37	-0.16	Rear	0	1	0	1:1.58		10	0.285	1.156	0.329	-
SCC	2 573.2	40422	QPSK	B	20					0	1	99	1:1.58						
Up-link Carrier Aggregation Power class 2 (HPUE) (41C)																			
PCC	2 593	40620	QPSK	B	20	24.6	23.97	0.12	Rear	0	1	0	1:2.31		10	0.254	1.156	0.294	**
SCC	2 573.2	40422	QPSK	B	20					0	1	99	1:2.31						
	2 506	39750	QPSK	F	20	20.0	19.27	0.11	Rear	0	1	0	1:1.58		10	0.196	1.183	0.232	-
	2 506	39750	QPSK	F	20	20.0	19.37	-0.11	Rear	0	50	0	1:1.58		10	0.199	1.156	0.230	-
	2 506	39750	QPSK	F	20	20.0	19.27	-0.16	Front	0	1	0	1:1.58		10	0.174	1.183	0.206	-
	2 506	39750	QPSK	F	20	20.0	19.37	-0.09	Front	0	50	0	1:1.58		10	0.184	1.156	0.213	-
	2 506	39750	QPSK	F	20	20.0	19.27	-0.06	Left	0	1	0	1:1.58		10	0.021	1.183	0.025	-
	2 506	39750	QPSK	F	20	20.0	19.37	-0.18	Left	0	50	0	1:1.58		10	0.024	1.156	0.028	-
	2 506	39750	QPSK	F	20	20.0	19.27	-0.05	Top	0	1	0	1:1.58		10	0.312	1.183	0.369	-
	2 506	39750	QPSK	F	20	20.0	19.37	-0.11	Top	0	50	0	1:1.58		10	0.296	1.156	0.342	-
	2 506	39750	QPSK	F	20	20.0	19.19	0.04	Top	0	1	99	1:1.58		10	0.336	1.219	0.410	-
	2 506	39750	QPSK	F	20	21.6	21.05	0.05	Top	0	1	0	1:2.31		10	0.324	1.135	0.368	**
	2 506	39750	QPSK	F	20	21.6	20.96	0.04	Top	0	1	99	1:2.31		10	**0.338**	1.159	0.392	**

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Note: ** Data entry indicate Power Class 2 Test Data.

LTE TDD Band 41 Hotspot SAR

Component CA	Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
	MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
Up-link Carrier Aggregation Power class 3 (41C)																			
PCC	2 506	39750	QPSK	F	20	20.0	19.14	0.01	Top	0	1	99	1:1.58		10	0.318	1.164	0.370	-
SCC	2 525.8	39948	QPSK	F	20						1	0							
Up-link Carrier Aggregation Power class 2 (HPUE) (41C)																			
PCC	2 506	39750	QPSK	F	20	21.6	21.02	-0.05	Top	0	1	99	1:2.31		10	0.326	1.143	0.373	**
SCC	2 525.8	39948	QPSK	F	20						1	0							
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram										

Note: ** Data entry indicate Power Class 2 Test Data.

LTE TDD Band 48 Hotspot SAR

Component CA	Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
	MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)			(W/kg)	
	3 560	55340	QPSK	F	20	22.0	20.99	0.00	Rear	0	1	0	1:1.58		10	0.332	1.262	0.419	-
	3 603.3	55773	QPSK	F	20	22.0	21.19	0.00	Rear	0	50	25	1:1.58		10	0.307	1.205	0.370	-
	3 560	55340	QPSK	F	20	22.0	20.99	-0.17	Front	0	1	0	1:1.58		10	0.155	1.262	0.196	-
	3 603.3	55773	QPSK	F	20	22.0	21.19	0.10	Front	0	50	25	1:1.58		10	0.123	1.205	0.148	-
	3 560	55340	QPSK	F	20	22.0	20.99	0.13	Left	0	1	0	1:1.58		10	0.057	1.262	0.072	-
	3 603.3	55773	QPSK	F	20	22.0	21.19	-0.10	Left	0	50	25	1:1.58		10	0.050	1.205	0.060	-
	3 560	55340	QPSK	F	20	22.0	20.99	-0.02	Top	0	1	0	1:1.58		10	**0.424**	1.262	**0.535**	B15
	3 603.3	55773	QPSK	F	20	22.0	21.19	-0.01	Top	0	50	25	1:1.58		10	0.349	1.205	0.421	-
	3 560	55340	QPSK	F	20	22.0	20.92	-0.05	Top	0	1	99	1:1.58		10	0.389	1.282	0.499	-
Up-link Carrier Aggregation (48C)																			
PCC	3 560	55340	QPSK	F	20	22.0	21.01	0.01	Top	0	1	99	1:1.58		10	0.357	1.256	0.448	-
SCC	3 579.8	55538	QPSK		20						1	0							
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram										

LTE FDD Band 66 Body/Hotspot SAR

Component CA	Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
	MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
	1 770	132572	QPSK	A	20	19.5	18.60	0.10	Rear	0	1	49	1:1	16	10	0.463	1.230	0.569	-
	1 745	132322	QPSK	A	20	19.5	18.71	0.18	Rear	0	50	49	1:1	16	10	0.489	1.199	0.586	-
	1 770	132572	QPSK	A	20	19.5	18.60	0.12	Front	0	1	49	1:1	16	10	0.375	1.230	0.461	-
	1 745	132322	QPSK	A	20	19.5	18.71	0.15	Front	0	50	49	1:1	16	10	0.397	1.199	0.476	-
	1 770	132572	QPSK	A	20	19.5	18.60	0.19	Left	0	1	49	1:1	16	10	0.034	1.230	0.042	-
	1 745	132322	QPSK	A	20	19.5	18.71	-0.17	Left	0	50	49	1:1	16	10	0.042	1.199	0.050	-
	1 770	132572	QPSK	A	20	19.5	18.60	-0.00	Right	0	1	49	1:1	16	10	0.067	1.230	0.082	-
	1 745	132322	QPSK	A	20	19.5	18.71	0.00	Right	0	50	49	1:1	16	10	0.069	1.199	0.083	-
	1 770	132572	QPSK	A	20	19.5	18.60	-0.18	Bottom	0	1	49	1:1	16	10	0.705	1.230	0.867	-
	1 720	132072	QPSK	A	20	19.5	18.39	-0.18	Bottom	0	1	99	1:1	16	10	0.684	1.291	0.883	-
	1 745	132322	QPSK	A	20	19.5	18.58	-0.19	Bottom	0	1	49	1:1	16	10	0.722	1.247	0.900	-
	1 745	132322	QPSK	A	20	19.5	18.71	-0.17	Bottom	0	50	49	1:1	16	10	0.728	1.199	0.873	-
	1 720	132072	QPSK	A	20	19.5	18.43	-0.10	Bottom	0	50	49	1:1	16	10	0.714	1.279	0.913	-
	1 770	132572	QPSK	A	20	19.5	18.58	-0.17	Bottom	0	50	25	1:1	16	10	0.720	1.236	0.890	-
	1 770	132572	QPSK	A	20	19.5	18.61	-0.19	Bottom	0	100	0	1:1	16	10	0.723	1.227	0.887	-
	1 775	132622	QPSK	A	20	19.5	18.48	-0.06	Bottom	0	1	0	1:1	16	10	0.785	1.265	0.993	-
	1 770	132572	QPSK	A	20	19.5	18.51	-0.05	Bottom	0	1	0	1:1	16	10	0.801	1.256	1.006	-
	1 770	132572	QPSK	A	20	19.5	18.51	-0.10	Bottom	0	1	0	1:1	16	10	**0.808**	1.256	**1.015**	B16*
Up-link Carrier Aggregation (66B)																			
PCC	1 775	132622	QPSK	A	10	19.5	18.45	-0.07	Bottom	0	1	0	1:1	16	10	0.691	1.274	0.880	-
SCC	1765.1	132523			10						1	49							
Up-link Carrier Aggregation (66C)																			
PCC	1 770	132572	QPSK	A	20	19.5	18.42	-0.05	Bottom	0	1	0	1:1	16	10	0.754	1.282	0.967	-
SCC	1750.2	132374			20						1	99							
	1 770	132572	QPSK	F	20	21.0	20.18	0.13	Rear	0	1	49	1:1		10	0.333	1.208	0.402	-
	1 720	132072	QPSK	F	20	21.0	20.27	0.15	Rear	0	50	49	1:1		10	0.321	1.183	0.380	-
	1 770	132572	QPSK	F	20	21.0	20.18	0.14	Front	0	1	49	1:1		10	0.219	1.208	0.265	-
	1 720	132072	QPSK	F	20	21.0	20.27	0.13	Front	0	50	49	1:1		10	0.233	1.183	0.276	-
	1 770	132572	QPSK	F	20	21.0	20.18	0.11	Left	0	1	49	1:1		10	0.087	1.208	0.105	-
	1 720	132072	QPSK	F	20	21.0	20.27	0.14	Left	0	50	49	1:1		10	0.100	1.183	0.118	-
	1 770	132572	QPSK	F	20	21.0	20.18	0.03	Top	0	1	49	1:1		10	0.504	1.208	0.609	-
	1 720	132072	QPSK	F	20	21.0	20.27	-0.00	Top	0	50	49	1:1		10	**0.523**	1.183	0.619	-
	1 775	132622	QPSK	F	10	21.0	19.96	-0.06	Top	0	1	0	1:1		10	0.352	1.271	0.447	-
	1 770	132572	QPSK	F	20	21.0	19.95	-0.09	Top	0	1	0	1:1		10	0.351	1.274	0.447	-
Up-link Carrier Aggregation (66B)																			
PCC	1 775	132622	QPSK	F	10	21.0	19.76	-0.12	Top	0	1	0	1:1		10	0.317	1.330	0.422	-
SCC	1 765.1	132523			10					0	1	49	1:1						
Up-link Carrier Aggregation (66C)																			
PCC	1 770	132572	QPSK	F	20	21.0	19.78	-0.11	Top	0	1	0	1:1		10	0.331	1.324	0.438	-
SCC	1 750.2	132374			20					0	1	99	1:1						

ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

Note: * Data entry indicate Variability measurement.

LTE FDD Band 71 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB Offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
680.5	133297	QPSK	A	20	25.0	23.67	-0.07	Rear	0	1	0	1:1	0	10	0.225	1.358	**0.306**	B17
680.5	133297	QPSK	A	20	24.0	22.75	0.01	Rear	1	50	0	1:1	0	10	0.201	1.334	0.268	-
680.5	133297	QPSK	A	20	25.0	23.67	-0.04	Front	0	1	0	1:1	0	10	0.166	1.358	0.225	-
680.5	133297	QPSK	A	20	24.0	22.75	-0.01	Front	1	50	0	1:1	0	10	0.131	1.334	0.175	-
680.5	133297	QPSK	A	20	25.0	23.67	-0.11	Left	0	1	0	1:1	0	10	0.079	1.358	0.107	-
680.5	133297	QPSK	A	20	24.0	22.75	-0.10	Left	1	50	0	1:1	0	10	0.071	1.334	0.095	-
680.5	133297	QPSK	A	20	25.0	23.67	-0.04	Right	0	1	0	1:1	0	10	0.178	1.358	0.242	-
680.5	133297	QPSK	A	20	24.0	22.75	-0.05	Right	1	50	0	1:1	0	10	0.133	1.334	0.177	-
680.5	133297	QPSK	A	20	25.0	23.67	-0.02	Bottom	0	1	0	1:1	0	10	0.114	1.358	0.155	-
680.5	133297	QPSK	A	20	24.0	22.75	-0.00	Bottom	1	50	0	1:1	0	10	0.086	1.334	0.115	-
680.5	133297	QPSK	E	20	25.0	24.84	0.06	Rear	0	1	0	1:1		10	0.206	1.038	0.214	-
680.5	133297	QPSK	E	20	24.0	23.71	0.10	Rear	1	50	0	1:1		10	0.172	1.069	0.184	-
680.5	133297	QPSK	E	20	25.0	24.84	-0.02	Front	0	1	0	1:1		10	0.168	1.038	0.174	-
680.5	133297	QPSK	E	20	24.0	23.71	0.04	Front	1	50	0	1:1		10	0.139	1.069	0.149	-
680.5	133297	QPSK	E	20	25.0	24.84	-0.00	Right	0	1	0	1:1		10	0.105	1.038	0.109	-
680.5	133297	QPSK	E	20	24.0	23.71	0.02	Right	1	50	0	1:1		10	0.100	1.069	0.107	-
680.5	133297	QPSK	E	20	25.0	24.84	0.15	Top	0	1	0	1:1		10	0.161	1.038	0.167	-
680.5	133297	QPSK	E	20	24.0	23.71	-0.05	Top	1	50	0	1:1		10	0.139	1.069	0.149	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR FDD Band n7 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.13	-0.14	Rear	0	1	214	1:1		10	0.400	1.222	0.489	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.04	0.03	Rear	0	108	108	1:1		10	0.388	1.247	0.484	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.13	0.05	Front	0	1	214	1:1		10	0.267	1.222	0.326	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.04	0.15	Front	0	108	108	1:1		10	0.264	1.247	0.329	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.13	0.10	Left	0	1	214	1:1		10	0.576	1.222	0.704	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.04	0.15	Left	0	108	108	1:1		10	0.542	1.247	0.676	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.13	0.16	Bottom	0	1	214	1:1		10	0.329	1.222	0.402	-
2 535	507000	DFT-s OFDM QPSK	B	40	21.0	20.04	0.19	Bottom	0	108	108	1:1		10	0.315	1.247	0.393	-
2 535	507000	CP QPSK	B	40	21.0	19.90	0.06	Left	0	1	1	1:1		10	0.495	1.288	0.638	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.01	-0.16	Rear	0	1	214	1:1		10	0.498	1.256	0.626	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.04	0.05	Rear	0	108	0	1:1		10	0.568	1.247	0.709	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.01	0.12	Front	0	1	214	1:1		10	0.413	1.256	0.519	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.04	0.13	Front	0	108	0	1:1		10	0.436	1.247	0.544	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.01	0.04	Left	0	1	214	1:1		10	0.071	1.256	0.089	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.04	0.10	Left	0	108	0	1:1		10	0.073	1.247	0.091	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.01	0.12	Top	0	1	214	1:1		10	0.693	1.256	0.870	-
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	20.04	0.18	Top	0	108	0	1:1		10	**0.759**	1.247	0.**947**	B18
2 535	507000	DFT-s OFDM QPSK	F	40	21.0	19.98	0.15	Top	0	216	0	1:1		10	0.747	1.265	0.945	-
2 535	507000	CP QPSK	F	40	21.0	20.23	0.10	Top	0	1	1	1:1		10	0.776	1.194	0.927	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR FDD Band n12 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.13	Rear	0	1	77	1:1	0	10	0.138	1.400	0.193	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.07	Rear	0	36	22	1:1	0	10	0.105	1.355	0.142	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.08	Front	0	1	77	1:1	0	10	0.074	1.400	0.104	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.04	Front	0	36	22	1:1	0	10	0.063	1.355	0.085	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.01	Left	0	1	77	1:1	0	10	0.055	1.400	0.077	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.09	Left	0	36	22	1:1	0	10	0.061	1.355	0.083	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	-0.10	Right	0	1	77	1:1	0	10	0.072	1.400	0.101	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.11	Right	0	36	22	1:1	0	10	0.070	1.355	0.095	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.54	0.07	Bottom	0	1	77	1:1	0	10	0.050	1.400	0.070	-
707.5	141500	DFT-s OFDM QPSK	A	15	25.0	23.68	0.14	Bottom	0	36	22	1:1	0	10	0.039	1.355	0.053	
707.5	141500	CP QPSK	A	15	23.5	22.09	-0.07	Rear	1.5	1	1	1:1	0	10	0.038	1.384	0.053	
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.24	-0.14	Rear	0	1	77	1:1		10	0.178	1.191	0.212	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.22	-0.08	Rear	0	36	22	1:1		10	0.206	1.197	**0.247**	B19
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.24	0.00	Front	0	1	77	1:1		10	0.122	1.191	0.145	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.22	-0.10	Front	0	36	22	1:1		10	0.139	1.197	0.166	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.24	-0.07	Right	0	1	77	1:1		10	0.119	1.191	0.142	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.22	0.04	Right	0	36	22	1:1		10	0.149	1.197	0.178	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.24	-0.08	Top	0	1	77	1:1		10	0.189	1.191	0.225	-
707.5	141500	DFT-s OFDM QPSK	E	15	25.0	24.22	0.09	Top	0	36	22	1:1		10	0.183	1.197	0.219	-
707.5	141500	CP QPSK	E	15	23.5	22.23	-0.11	Rear	1.5	1	1	1:1		10	0.088	1.340	0.118	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

NR FDD Band n25 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.79	-0.12	Rear	0	1	214	1:1	1	10	0.305	1.321	0.403	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.85	-0.07	Rear	0	108	0	1:1	1	10	0.341	1.303	0.444	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.79	-0.13	Front	0	1	214	1:1	1	10	0.228	1.321	0.301	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.85	0.13	Front	0	108	0	1:1	1	10	0.277	1.303	0.361	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.79	0.13	Left	0	1	214	1:1	1	10	0.024	1.321	0.032	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.85	-0.10	Left	0	108	0	1:1	1	10	0.035	1.303	0.046	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.79	0.12	Right	0	1	214	1:1	1	10	0.055	1.321	0.073	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.85	0.10	Right	0	108	0	1:1	1	10	0.045	1.303	0.059	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.79	-0.05	Bottom	0	1	214	1:1	1	10	0.659	1.321	0.871	-
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.85	-0.09	Bottom	0	108	0	1:1	1	10	0.745	1.303	**0.971**	B20
1 882.5	376500	DFT-s OFDM QPSK	A	40	20.0	18.73	-0.04	Bottom	0	216	0	1:1	1	10	0.705	1.340	0.945	-
1 882.5	376500	CP QPSK	A	40	20.0	18.85	0.04	Bottom	0	1	1	1:1	1	10	0.671	1.303	0.874	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.25	-0.15	Rear	0	1	214	1:1		10	0.246	1.189	0.292	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.22	-0.05	Rear	0	108	0	1:1		10	0.219	1.197	0.262	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.25	-0.11	Front	0	1	214	1:1		10	0.256	1.189	0.304	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.22	-0.09	Front	0	108	0	1:1		10	0.210	1.197	0.251	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.25	0.09	Left	0	1	214	1:1		10	0.069	1.189	0.082	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.22	-0.10	Left	0	108	0	1:1		10	0.092	1.197	0.110	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.25	-0.03	Top	0	1	214	1:1		10	0.412	1.189	0.490	-
1 882.5	376500	DFT-s OFDM QPSK	F	40	21.0	20.22	-0.14	Top	0	108	0	1:1		10	0.463	1.197	0.554	-
1 882.5	376500	CP QPSK	F	40	21.0	20.19	-0.16	Top	0	1	1	1:1		10	0.446	1.205	0.537	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR FDD Band n26 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.14	Rear	0	1	1	1:1	0	10	0.376	1.340	**0.504**	B21
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.12	Rear	0	50	28	1:1	0	10	0.352	1.390	0.489	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	-0.15	Front	0	1	1	1:1	0	10	0.138	1.340	0.244	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.11	Front	0	50	28	1:1	0	10	0.200	1.390	0.278	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	-0.02	Left	0	1	1	1:1	0	10	0.051	1.340	0.068	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	-0.02	Left	0	50	28	1:1	0	10	0.047	1.390	0.065	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.05	Right	0	1	1	1:1	0	10	0.073	1.340	0.098	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.01	Right	0	50	28	1:1	0	10	0.076	1.390	0.106	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.73	0.11	Bottom	0	1	1	1:1	0	10	0.198	1.340	0.265	-
831.5	166300	DFT-s OFDM QPSK	A	20	25.0	23.57	0.14	Bottom	0	50	28	1:1	0	10	0.204	1.390	0.284	-
831.5	166300	CP QPSK	A	20	23.5	22.21	0.17	Rear	1.5	1	1	1:1	0	10	0.258	1.346	0.347	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.31	-0.15	Rear	0	1	1	1:1		10	0.100	1.172	0.117	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.12	0.04	Rear	0	50	28	1:1		10	0.192	1.225	0.235	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.31	-0.11	Front	0	1	1	1:1		10	0.058	1.172	0.068	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.12	-0.02	Front	0	50	28	1:1		10	0.119	1.225	0.146	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.31	0.13	Right	0	1	1	1:1		10	0.074	1.172	0.087	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.12	0.05	Right	0	50	28	1:1		10	0.127	1.225	0.156	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.31	-0.17	Top	0	1	1	1:1		10	0.065	1.172	0.076	-
831.5	166300	DFT-s OFDM QPSK	E	20	25.0	24.12	-0.05	Top	0	50	28	1:1		10	0.122	1.225	0.149	-
831.5	166300	CP QPSK	E	20	23.5	22.93	-0.13	Rear	1.5	1	1	1:1		10	0.071	1.140	0.081	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR FDD Band n30 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.57	-0.12	Rear	0	1	1	1:1		10	0.152	1.390	0.211	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.64	-0.15	Rear	0	25	0	1:1		10	0.147	1.368	0.201	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.57	0.10	Front	0	1	1	1:1		10	0.203	1.390	0.282	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.64	0.16	Front	0	25	0	1:1		10	0.193	1.368	0.264	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.57	-0.08	Left	0	1	1	1:1		10	0.00496	1.390	0.007	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.64	-0.10	Left	0	25	0	1:1		10	0.00518	1.368	0.007	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.57	0.15	Right	0	1	1	1:1		10	0.00517	1.390	0.007	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.64	-0.12	Right	0	25	0	1:1		10	0.011	1.368	0.015	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.57	0.09	Bottom	0	1	1	1:1		10	0.483	1.390	0.671	-
2 310	462000	DFT-s OFDM QPSK	A	10	20.0	18.64	0.13	Bottom	0	25	0	1:1		10	0.522	1.368	0.714	-
2 310	462000	CP QPSK	A	10	20.0	18.70	0.02	Bottom	1.5	1	1	1:1		10	0.529	1.303	0.689	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.06	0.02	Rear	0	1	1	1:1		10	0.347	1.242	0.431	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.00	-0.07	Rear	0	25	0	1:1		10	0.311	1.259	0.392	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.06	-0.05	Front	0	1	1	1:1		10	0.262	1.242	0.325	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.00	-0.09	Front	0	25	0	1:1		10	0.240	1.259	0.302	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.06	-0.06	Left	0	1	1	1:1		10	0.063	1.242	0.078	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.00	0.19	Left	0	25	0	1:1		10	0.060	1.259	0.076	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.06	0.08	Top	0	1	1	1:1		10	0.723	1.242	**0.898**	B22
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.00	0.11	Top	0	25	0	1:1		10	0.660	1.259	0.831	-
2 310	462000	DFT-s OFDM QPSK	F	10	21.0	20.01	0.10	Top	0	50	0	1:1		10	0.653	1.256	0.820	
2 310	462000	CP QPSK	F	10	21.0	20.31	0.16	Top	1.5	1	1	1:1		10	0.745	1.172	0.873	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR TDD Band n41 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.88	-0.16	Rear	0	1	1	1:1		10	0.454	1.028	0.467	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.74	0.11	Rear	0	135	0	1:1		10	0.431	1.062	0.458	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.88	-0.00	Front	0	1	1	1:1		10	0.308	1.028	0.317	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.74	-0.18	Front	0	135	0	1:1		10	0.276	1.062	0.293	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.88	0.02	Left	0	1	1	1:1		10	0.631	1.028	0.649	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.74	0.07	Left	0	135	0	1:1		10	0.670	1.062	0.712	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.65	-0.17	Left	0	270	0	1:1		10	0.676	1.084	**0.733**	B23
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.88	0.19	Bottom	0	1	1	1:1		10	0.479	1.028	0.492	-
2 592.99	518598	DFT-s OFDM QPSK	B	100	21.0	20.74	0.15	Bottom	0	135	0	1:1		10	0.419	1.062	0.445	-
2 592.99	518598	CP QPSK	B	100	21.0	20.74	0.18	Left	0	1	1	1:1		10	0.670	1.062	0.712	-
2 592.99	518598	CW	F	100	20.0	19.70	-0.01	Rear	0	-	-	1:1		10	0.486	1.072	0.521	-
2 592.99	518598	CW	F	100	20.0	19.70	0.17	Front	0	-	-	1:1		10	0.449	1.072	0.481	-
2 592.99	518598	CW	F	100	20.0	19.70	0.16	Left	0	-	-	1:1		10	0.030	1.072	0.032	-
2 592.99	518598	CW	F	100	20.0	19.70	-0.10	Top	0	-	-	1:1		10	0.757	1.072	0.811	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.67	0.18	Rear	0	1	137	1:1		10	0.359	1.079	0.387	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.65	0.00	Rear	0	135	138	1:1		10	0.354	1.084	0.384	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.67	0.15	Front	0	1	137	1:1		10	0.291	1.079	0.314	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.65	0.17	Front	0	135	138	1:1		10	0.264	1.084	0.286	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.67	0.11	Left	0	1	137	1:1		10	0.045	1.079	0.049	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.65	0.16	Left	0	135	138	1:1		10	0.043	1.084	0.047	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.67	0.14	Top	0	1	137	1:1		10	0.544	1.079	0.587	-
2 592.99	518598	DFT-s OFDM QPSK	F	100	20.0	19.65	0.19	Top	0	135	138	1:1		10	0.486	1.084	0.527	-
2 592.99	518598	CP QPSK	F	100	20.0	19.83	0.10	Top	0	1	1	1:1		10	0.630	1.040	0.655	-
2 592.99	518598	CW	B	100	21.0	20.98	-0.18	Rear	0	-	-	1:1		10	0.668	1.005	0.671	
2 592.99	518598	CW	B	100	21.0	20.98	-0.07	Front	0	-	-	1:1		10	0.303	1.005	0.304	
2 592.99	518598	CW	B	100	21.0	20.98	0.09	Left	0	-	-	1:1		10	0.533	1.005	0.535	
2 592.99	518598	CW	B	100	21.0	20.98	0.17	Bottom	0	-	-	1:1		10	0.378	1.005	0.380	
2 592.99	518598	CW	D	100	20.0	19.42	-0.03	Rear	0	-	-	1:1		10	0.111	1.143	0.127	-
2 592.99	518598	CW	D	100	20.0	19.42	0.00	Front	0	-	-	1:1		10	0	1.143	0.000	-
2 592.99	518598	CW	D	100	20.0	19.42	0.00	Right	0	-	-	1:1		10	0	1.143	0.000	-
2 592.99	518598	CW	D	100	20.0	19.42	0.12	Bottom	0	-	-	1:1		10	0.024	1.143	0.027	-
2 592.99	518598	CW	E	100	17.0	16.75	0.00	Rear	0	-	-	1:1		10	0.020	1.059	0.021	-
2 592.99	518598	CW	E	100	17.0	16.75	0.00	Front	0	-	-	1:1		10	0.00912	1.059	0.010	-
2 592.99	518598	CW	E	100	17.0	16.75	0.05	Right	0	-	-	1:1		10	0.025	1.059	0.026	-
2 592.99	518598	CW	E	100	17.0	16.75	-0.13	Top	0	-	-	1:1		10	0.033	1.059	0.035	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

NR TDD Band n48 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.62	0.00	Rear	0	1	104	1:1		10	0.342	1.091	0.373	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.70	0.00	Rear	0	50	56	1:1		10	0.345	1.072	0.370	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.62	-0.17	Front	0	1	104	1:1		10	0.118	1.091	0.129	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.70	-0.19	Front	0	50	56	1:1		10	0.112	1.072	0.120	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.62	-0.15	Left	0	1	104	1:1		10	0.049	1.091	0.053	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.70	0.11	Left	0	50	56	1:1		10	0.047	1.072	0.050	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.62	0.15	Top	0	1	104	1:1		10	0.292	1.091	0.319	-
3 680.01	645334	DFT-s OFDM QPSK	F	40	20.0	19.70	0.06	Top	0	50	56	1:1		10	0.298	1.072	0.319	-
3 680.01	645334	CP QPSK	F	40	20.0	19.77	0.00	Rear	0	1	1	1:1		10	0.352	1.054	0.371	-
3 624.99	641666	CW	C	40	17.0	16.69	0.00	Rear	0	-	-	1:1		10	0.250	1.074	0.268	-
3 624.99	641666	CW	C	40	17.0	16.69	0.00	Front	0	-	-	1:1		10	0.297	1.074	0.319	-
3 624.99	641666	CW	C	40	17.0	16.69	0.11	Left	0	-	-	1:1		10	0.421	1.074	0.452	-
3 624.99	641666	CW	C	40	17.0	16.69	0.18	Bottom	0	-	-	1:1		10	0.146	1.074	0.157	-
3570	638000	CW	I	40	17.5	17.45	0.17	Rear	0	-	-	1:1		10	0.518	1.012	0.524	
3570	638000	CW	I	40	17.5	17.45	0.17	Front	0	-	-	1:1		10	0.571	1.012	0.578	
3570	638000	CW	I	40	17.5	17.45	0.16	Left	0	-	-	1:1		10	0.227	1.012	0.230	
3570	638000	CW	D	40	16.0	15.81	-0.12	Rear	0	-	-	1:1		10	0.753	1.045	**0.787**	B24
3570	638000	CW	D	40	16.0	15.81	0.00	Front	0	-	-	1:1		10	0.028	1.045	0.029	
3570	638000	CW	D	40	16.0	15.81	-0.17	Right	0	-	-	1:1		10	0.015	1.045	0.016	
3570	638000	CW	D	40	16.0	15.81	0.19	Bottom	0	-	-	1:1		10	0.121	1.045	0.126	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR FDD Band n66 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.97	-0.04	Rear	0	1	108	1:1	16	10	0.718	1.007	0.723	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.88	-0.16	Rear	0	108	54	1:1	16	10	0.614	1.028	0.631	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.97	-0.13	Front	0	1	108	1:1	16	10	0.526	1.007	0.530	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.88	0.14	Front	0	108	54	1:1	16	10	0.493	1.028	0.507	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.97	0.19	Left	0	1	108	1:1	16	10	0.048	1.007	0.048	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.88	-0.16	Left	0	108	54	1:1	16	10	0.049	1.028	0.050	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.97	0.14	Right	0	1	108	1:1	16	10	0.072	1.007	0.073	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.88	-0.12	Right	0	108	54	1:1	16	10	0.074	1.028	0.076	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.97	-0.14	Bottom	0	1	108	1:1	16	10	1.010	1.007	1.017	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.88	-0.19	Bottom	0	108	54	1:1	16	10	1.010	1.028	1.038	-
1 745	349000	DFT-s OFDM QPSK	A	40	19.0	18.84	-0.09	Bottom	0	216	0	1:1	16	10	1.030	1.038	1.069	-
1 745	349000	CP OFDM QPSK	A	40	19.0	18.83	-0.17	Bottom	0	1	1	1:1	16	10	1.030	1.040	**1.071**	B25
1 745	349000	CP OFDM QPSK	A	40	19.0	18.83	-0.03	Bottom	0	1	1	1:1	16	10	0.966	1.040	1.005	*
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.55	-0.17	Rear	0	1	214	1:1		10	0.314	1.109	0.348	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.59	-0.17	Rear	0	108	54	1:1		10	0.463	1.099	0.509	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.55	0.13	Front	0	1	214	1:1		10	0.324	1.109	0.359	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.59	0.04	Front	0	108	54	1:1		10	0.351	1.099	0.386	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.55	0.10	Left	0	1	214	1:1		10	0.110	1.109	0.122	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.59	-0.17	Left	0	108	54	1:1		10	0.107	1.099	0.118	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.55	-0.06	Top	0	1	214	1:1		10	0.611	1.109	0.678	-
1 745	349000	DFT-s OFDM QPSK	F	40	21.0	20.59	-0.07	Top	0	108	54	1:1		10	0.611	1.099	0.671	-
1 745	349000	CP OFDM QPSK	F	40	21.0	20.64	-0.09	Top	0	1	1	1:1		10	0.680	1.086	0.738	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

Note: * Data entry indicate Variability measurement.

NR FDD Band n70 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.27	-0.07	Rear	0	1	1	1:1	16	10	0.518	1.183	0.613	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.37	-0.11	Rear	0	36	0	1:1	16	10	0.515	1.156	0.595	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.27	-0.14	Front	0	1	1	1:1	16	10	0.434	1.183	0.513	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.37	-0.03	Front	0	36	0	1:1	16	10	0.420	1.156	0.486	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.27	0.11	Left	0	1	1	1:1	16	10	0.069	1.183	0.082	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.37	-0.18	Left	0	36	0	1:1	16	10	0.061	1.156	0.071	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.27	-0.13	Right	0	1	1	1:1	16	10	0.075	1.183	0.089	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.37	-0.12	Right	0	36	0	1:1	16	10	0.071	1.156	0.082	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.27	-0.04	Bottom	0	1	1	1:1	16	10	0.817	1.183	**0.967**	B26
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.37	-0.07	Bottom	0	36	0	1:1	16	10	0.818	1.156	0.946	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.34	-0.03	Bottom	0	75	0	1:1	16	10	0.826	1.164	0.961	-
1 702.5	340500	CP OFDM QPSK	A	15	20.0	19.48	-0.13	Bottom	0	1	1	1:1	16	10	0.809	1.127	0.912	-
1 702.5	340500	DFT-s OFDM QPSK	A	15	20.0	19.34	-0.07	Bottom	0	75	0	1:1	16	10	0.819	1.164	0.953	*
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.13	-0.13	Rear	0	1	1	1:1		10	0.419	1.222	0.512	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.15	-0.12	Rear	0	36	22	1:1		10	0.352	1.216	0.428	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.13	0.10	Front	0	1	1	1:1		10	0.339	1.222	0.414	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.15	-0.13	Front	0	36	22	1:1		10	0.340	1.216	0.413	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.13	0.14	Left	0	1	1	1:1		10	0.098	1.222	0.120	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.15	-0.12	Left	0	36	22	1:1		10	0.097	1.216	0.118	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.13	-0.10	Top	0	1	1	1:1		10	0.685	1.222	0.837	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.15	-0.06	Top	0	36	22	1:1		10	0.652	1.216	0.793	-
1 702.5	340500	DFT-s OFDM QPSK	F	15	21.0	20.16	-0.19	Top	0	75	0	1:1		10	0.645	1.213	0.782	-
1 702.5	340500	CP OFDM QPSK	F	15	21.0	20.30	0.13	Top	0	1	1	1:1		10	0.647	1.175	0.760	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

Note: * Data entry indicate Variability measurement.

NR FDD Band n71 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	0.04	Rear	0	1	1	1:1	0	10	0.101	1.076	0.109	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	-0.04	Rear	0	50	28	1:1	0	10	0.138	1.094	0.151	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	0.02	Front	0	1	1	1:1	0	10	0.074	1.076	0.080	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.01	Front	0	50	28	1:1	0	10	0.091	1.094	0.100	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	0.10	Left	0	1	1	1:1	0	10	0.073	1.076	0.079	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.08	Left	0	50	28	1:1	0	10	0.094	1.094	0.103	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	0.03	Right	0	1	1	1:1	0	10	0.078	1.076	0.084	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.07	Right	0	50	28	1:1	0	10	0.099	1.094	0.108	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.68	0.16	Bottom	0	1	1	1:1	0	10	0.041	1.076	0.044	-
680.5	136100	DFT-s OFDM QPSK	A	20	25.0	24.61	0.13	Bottom	0	50	28	1:1	0	10	0.048	1.094	0.053	-
680.5	136100	CP OFDM QPSK	A	20	23.5	23.24	-0.09	Rear	1.5	1	1	1:1	0	10	0.080	1.062	0.085	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.72	-0.14	Rear	0	1	1	1:1		10	0.161	1.067	0.172	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.59	0.04	Rear	0	50	28	1:1		10	0.209	1.099	**0.230**	B27
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.72	0.03	Front	0	1	1	1:1		10	0.098	1.067	0.105	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.59	0.06	Front	0	50	28	1:1		10	0.138	1.099	0.152	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.72	-0.17	Right	0	1	1	1:1		10	0.117	1.067	0.125	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.59	0.03	Right	0	50	28	1:1		10	0.169	1.099	0.186	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.72	-0.08	Top	0	1	1	1:1		10	0.089	1.067	0.095	-
680.5	136100	DFT-s OFDM QPSK	E	20	25.0	24.59	0.16	Top	0	50	28	1:1		10	0.146	1.099	0.160	-
680.5	136100	CP OFDM QPSK	E	20	23.5	23.17	-0.18	Rear	1.5	1	1	1:1		10	0.095	1.079	0.102	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR TDD Band n77 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.75	0.00	Rear	0	1	1	1:1		10	0.247	1.059	0.262	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.45	0.00	Rear	0	135	0	1:1		10	0.242	1.135	0.275	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.75	0.00	Front	0	1	1	1:1		10	0.063	1.059	0.067	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.45	-0.00	Front	0	135	0	1:1		10	0.066	1.135	0.075	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.75	-0.17	Left	0	1	1	1:1		10	0.033	1.059	0.035	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.45	0.11	Left	0	135	0	1:1		10	0.025	1.135	0.028	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.75	0.09	Top	0	1	1	1:1		10	0.207	1.059	0.219	-
3750	650000	DFT-s OFDM QPSK	F	100	18.0	17.45	0.16	Top	0	135	0	1:1		10	0.217	1.135	0.246	-
3750	650000	CP QPSK	F	100	18.0	17.08	-0.01	Rear	0	1	1	1:1		10	0.228	1.236	0.282	-
3500.01	633334	DFT-s OFDM QPSK	F	100	18.0	17.88	0.00	Rear	0	1	271	1:1		10	0.143	1.028	0.147	-
3750	650000	CW	C	100	17.5	16.88	-0.10	Rear	0	-	-	1:1		10	0.337	1.153	0.389	-
3750	650000	CW	C	100	17.5	16.88	0.00	Front	0	-	-	1:1		10	0.173	1.153	0.200	-
3750	650000	CW	C	100	17.5	16.88	-0.08	Left	0	-	-	1:1		10	0.515	1.153	0.594	-
3750	650000	CW	C	100	17.5	16.88	-0.07	Bottom	0	-	-	1:1		10	0.129	1.153	0.149	-
3500.01	633334	CW	C	100	17.5	17.48	0.03	Left	0	-	-	1:1		10	0.613	1.005	0.616	-
3750	650000	CW	I	100	17.5	17.06	-0.13	Rear	0	-	-	1:1		10	0.124	1.107	0.137	-
3750	650000	CW	I	100	17.5	17.06	-0.05	Front	0	-	-	1:1		10	0.196	1.107	0.217	-
3750	650000	CW	I	100	17.5	17.06	0.16	Left	0	-	-	1:1		10	0.081	1.107	0.090	-
3500.01	633334	CW	I	100	17.5	16.51	-0.16	Front	0	-	-	1:1		10	0.354	1.256	0.445	-
3750	650000	CW	D	100	17.5	17.23	-0.14	Rear	0	-	-	1:1		10	0.788	1.064	**0.839**	B28
3750	650000	CW	D	100	17.5	16.82	-0.01	Rear	0	-	-	1:1		10	0.561	1.169	0.656	
3750	650000	CW	D	100	17.5	17.23	-0.01	Front	0	-	-	1:1		10	0.057	1.064	0.061	-
3750	650000	CW	D	100	17.5	17.23	0.15	Right	0	-	-	1:1		10	0.062	1.064	0.066	-
3750	650000	CW	D	100	17.5	17.23	0.16	Bottom	0	-	-	1:1		10	0.187	1.064	0.199	-
3500.01	633334	CW	D	100	17.5	16.52	-0.16	Rear	0	-	-	1:1		10	0.494	1.253	0.619	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram										

NR TDD Band n78 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.67	0.00	Rear	0	1	271	1:1		10	0.333	1.079	0.359	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.24	0.00	Rear	0	135	0	1:1		10	0.393	1.191	0.468	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.67	0.00	Rear	0	270	0	1:1		10	0.453	1.079	**0.489**	B29
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.67	0.16	Front	0	1	271	1:1		10	0.154	1.079	0.166	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.24	0.13	Front	0	135	0	1:1		10	0.162	1.191	0.193	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.67	0.03	Left	0	1	271	1:1		10	0.047	1.079	0.051	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.24	0.13	Left	0	135	0	1:1		10	0.052	1.191	0.062	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.67	0.10	Top	0	1	271	1:1		10	0.296	1.079	0.319	-
3750	650000	DFT-s OFDM QPSK	F	100	20.0	19.24	0.10	Top	0	135	0	1:1		10	0.340	1.191	0.405	
3750	650000	CP QPSK	F	100	20.0	19.26	0.00	Rear	0	1	1	1:1		10	0.409	1.186	0.485	
3500.01	633334	DFT-s OFDM QPSK	F	100	20.0	19.98	0.00	Rear	0	1	1	1:1		10	0.463	1.005	0.465	

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

DTS Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Duty Cycle	Distance	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Reported SAR	Plot No.
MHz	Ch.			(MHz)	(Mbps)	(dBm)	(dBm)	(dB)				(mm)	(W/kg)	(W/kg)		(Duty)	(W/kg)	
2 412	1	802.11b	H	20	1	20.0	19.01	0.00	Rear	WIFI1	99.0	10	0.483	0.297	1.256	1.010	0.377	-
2 412	1	802.11b	H	20	1	20.0	19.01	-0.14	Front	WIFI1	99.0	10	0.132	0.068	1.256	1.010	0.086	-
2 412	1	802.11b	H	20	1	20.0	19.01	0.15	Left	WIFI1	99.0	10	0.916	0.572	1.256	1.010	**0.726**	B30
2 412	1	802.11b	H	20	1	20.0	19.01	0.12	Top	WIFI1	99.0	10	0.198	0.122	1.256	1.010	0.155	-
2 437	6	802.11b	J	20	1	20.0	18.59	0.18	Rear	WIFI2	99.0	10	0.710	0.414	1.384	1.010	0.579	-
2 437	6	802.11b	J	20	1	20.0	18.59	0.15	Front	WIFI2	99.0	10	0.354	0.242	1.384	1.010	0.338	-
2 437	6	802.11b	J	20	1	20.0	18.59	-0.07	Right	WIFI2	99.0	10	0.115	0.052	1.384	1.010	0.073	-
2 437	6	802.11b	J	20	1	20.0	18.59	0.01	Top	WIFI2	99.0	10	0.00614	0	1.384	1.010	0.000	-

ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Body 1.6 W/kg Averaged over 1 gram

5 GHz WLAN Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 270	54	802.11n	H	40	MCS0	16.0	15.97	-0.12	Rear	WIFI1	86.0	10	0.593	0.259	1.007	1.156	0.301	
5 270	54	802.11n	H	40	MCS0	16.0	15.97	-0.00	Front	WIFI1	86.0	10	0.239	0.096	1.007	1.156	0.112	
5 710	142	802.11n	H	40	MCS0	16.0	15.99	-0.15	Rear	WIFI1	86.0	10	0.340	0.154	1.002	1.156	0.178	
5 710	142	802.11n	H	40	MCS0	16.0	15.99	0.00	Front	WIFI1	86.0	10	0.225	0.092	1.002	1.156	0.107	
5 755	151	802.11n	H	40	MCS0	16.0	15.94	-0.06	Rear	WIFI1	86.0	10	0.408	0.180	1.014	1.156	0.211	-
5 755	151	802.11n	H	40	MCS0	16.0	15.94	0.00	Front	WIFI1	86.0	10	0.388	0.147	1.014	1.156	0.172	-
5 755	151	802.11n	H	40	MCS0	16.0	15.94	0.14	Left	WIFI1	86.0	10	0.960	0.416	1.014	1.156	**0.488**	B31
5 755	151	802.11n	H	40	MCS0	16.0	15.94	0.12	Top	WIFI1	86.0	10	0.203	0.094	1.014	1.156	0.110	-
5 835	167	802.11n	H	40	MCS0	16.0	15.78	-0.13	Rear	WIFI1	86.0	10	0.367	0.159	1.052	1.156	0.194	
5 835	167	802.11n	H	40	MCS0	16.0	15.78	0.00	Front	WIFI1	86.0	10	0.298	0.120	1.052	1.156	0.147	
5 270	54	802.11n	E	40	MCS0	16.0	14.84	0.00	Rear	WIFI2	86.0	10	0.475	0.211	1.306	1.156	0.320	
5 270	54	802.11n	E	40	MCS0	16.0	14.84	0.00	Front	WIFI2	86.0	10	0.0755	0.016	1.306	1.156	0.024	
5 690	118	802.11n	E	40	MCS0	16.0	15.08	0.00	Rear	WIFI2	86.0	10	0.666	0.328	1.236	1.156	0.469	
5 690	118	802.11n	E	40	MCS0	16.0	15.08	0.00	Front	WIFI2	86.0	10	0.0609	0.010	1.236	1.156	0.014	
5 795	159	802.11n	E	40	MCS0	16.0	15.48	-0.19	Rear	WIFI2	86.0	10	0.478	0.204	1.127	1.156	0.267	-
5 795	159	802.11n	E	40	MCS0	16.0	15.48	0.00	Front	WIFI2	86.0	10	0.0584	0.00628	1.127	1.156	0.008	-
5 795	159	802.11n	E	40	MCS0	16.0	15.48	0.18	Right	WIFI2	86.0	10	0.0985	0.035	1.127	1.156	0.046	-
5 795	159	802.11n	E	40	MCS0	16.0	15.48	0.11	Top	WIFI2	86.0	10	0.139	0.061	1.127	1.156	0.080	-
5 835	167	802.11n	E	40	MCS0	16.0	15.30	-0.11	Rear	WIFI2	86.0	10	0.445	0.214	1.175	1.156	0.292	
5 835	167	802.11n	E	40	MCS0	16.0	15.30	-0.19	Front	WIFI2	86.0	10	0.0418	0.020	1.175	1.156	0.027	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population													Body 1.6 W/kg Averaged over 1 gram					

DSS Body/Tethering SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Ant Config.	Distance	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)	(W/kg)		(Duty)	(W/kg)	
2 441	39	Bluetooth DH5	H	19.0	18.46	-0.13	Rear	Ant.1	10	0.180	1.132	1.010	0.206	-
2 441	39	Bluetooth DH5	H	19.0	18.46	0.17	Front	Ant.1	10	0.240	1.132	1.010	0.274	-
2 441	39	Bluetooth DH5	H	19.0	18.46	-0.10	Left	Ant.1	10	0.287	1.132	1.010	**0.328**	B32
2 441	39	Bluetooth DH5	H	19.0	18.46	-0.07	Top	Ant.1	10	0.075	1.132	1.010	0.086	-
2 402	0	Bluetooth DH5	J	20.0	19.44	-0.13	Rear	Ant.2	10	0.283	1.138	1.010	0.325	-
2 402	0	Bluetooth DH5	J	20.0	19.44	-0.18	Front	Ant.2	10	0.220	1.138	1.010	0.253	-
2 402	0	Bluetooth DH5	J	20.0	19.44	-0.10	Right	Ant.2	10	0.042	1.138	1.010	0.048	-
2 402	0	Bluetooth DH5	J	20.0	19.44	0.00	Top	Ant.2	10	0.00165	1.138	1.010	0.002	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram				

13.4 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

13.5 Phablet SAR Measurement Results

5 GHz WLAN Phablet SAR _10g																		
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant. Config.	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																	
5 270	54	802.11n	H	40	MCS0	16.0	15.97	-0.16	Rear	WIFI1	86.0	0	6.34	0.724	1.007	1.156	0.843	-
5 270	54	802.11n	H	40	MCS0	16.0	15.97	0.00	Front	WIFI1	86.0	0	3.68	0.535	1.007	1.156	0.623	-
5 270	54	802.11n	H	40	MCS0	16.0	15.97	-0.15	Left	WIFI1	86.0	0	14.3	1.330	1.007	1.156	1.548	-
5 270	54	802.11n	H	40	MCS0	16.0	15.97	0.13	Top	WIFI1	86.0	0	0.148	0.026	1.007	1.156	0.030	-
5 710	142	802.11n	H	40	MCS0	16.0	15.99	0.15	Rear	WIFI1	86.0	0	4.50	0.654	1.002	1.156	0.758	-
5 710	142	802.11n	H	40	MCS0	16.0	15.99	0.00	Front	WIFI1	86.0	0	4.79	0.451	1.002	1.156	0.523	-
5 710	142	802.11n	H	40	MCS0	16.0	15.99	0.15	Left	WIFI1	86.0	0	21.8	1.470	1.002	1.156	1.703	-
5 710	142	802.11n	H	40	MCS0	16.0	15.99	0.00	Top	WIFI1	86.0	0	2.37	0.154	1.002	1.156	0.179	-
5 835	167	802.11n	H	40	MCS0	16.0	15.78	0.00	Rear	WIFI1	86.0	0	3.13	0.449	1.052	1.156	0.546	-
5 835	167	802.11n	H	40	MCS0	16.0	15.78	0.00	Front	WIFI1	86.0	0	6.05	0.503	1.052	1.156	0.612	-
5 835	167	802.11n	H	40	MCS0	16.0	15.78	0.11	Left	WIFI1	86.0	0	21.7	1.670	1.052	1.156	2.031	-
5 875	175	802.11n	H	40	MCS0	16.0	15.30	0.17	Left	WIFI1	86.0	0	25.9	1.750	1.175	1.156	**2.377**	C1
5 835	167	802.11n	H	40	MCS0	16.0	15.78	0.00	Top	WIFI1	86.0	0	2.00	0.174	1.052	1.156	0.212	-
5 270	54	802.11n	J	40	MCS0	16.0	14.84	-0.14	Rear	WIFI2	86.0	0	4.50	0.576	1.306	1.156	0.870	-
5 270	54	802.11n	J	40	MCS0	16.0	14.84	0.00	Front	WIFI2	86.0	0	1.68	0.178	1.306	1.156	0.269	-
5 270	54	802.11n	J	40	MCS0	16.0	14.84	0.00	Right	WIFI2	86.0	0	0.367	0.039	1.306	1.156	0.059	-
5 270	54	802.11n	J	40	MCS0	16.0	14.84	0.15	Top	WIFI2	86.0	0	0.706	0.111	1.306	1.156	0.168	-
5 590	118	802.11n	J	40	MCS0	16.0	15.08	0.00	Rear	WIFI2	86.0	0	10.9	0.951	1.236	1.156	1.359	-
5 590	118	802.11n	J	40	MCS0	16.0	15.08	0.00	Front	WIFI2	86.0	0	1.190	0.110	1.236	1.156	0.157	-
5 590	118	802.11n	J	40	MCS0	16.0	15.08	0.00	Right	WIFI2	86.0	0	0.297	0.046	1.236	1.156	0.066	-
5 590	118	802.11n	J	40	MCS0	16.0	15.08	0.12	Top	WIFI2	86.0	0	1.300	0.167	1.236	1.156	0.239	-
5 835	167	802.11n	J	40	MCS0	16.0	15.30	-0.00	Rear	WIFI2	86.0	0	3.23	0.498	1.175	1.156	0.676	-
5 835	167	802.11n	J	40	MCS0	16.0	15.30	0.00	Front	WIFI2	86.0	0	0.830	0.091	1.175	1.156	0.124	-
5 835	167	802.11n	J	40	MCS0	16.0	15.30	0.00	Right	WIFI2	86.0	0	0.149	0.016	1.175	1.156	0.022	-
5 835	167	802.11n	J	40	MCS0	16.0	15.30	0.13	Top	WIFI2	86.0	0	0.662	0.111	1.175	1.156	0.151	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population													Hand 4.0 W/kg Averaged over 10 gram					

NFC Phablet SAR _10g							
Frequency	Mode	Data Rate	Power Drift	Test Position	Distance	Meas. SAR	Plot No.
㎒		(Kbps)	(dB)		(㎜)	(W/kg)	
13.56	NFC (Type B)	106	0.10	Rear	0	**0.026**	C2
13.56	NFC (Type B)	106	0.00	Front	0	0	-
13.56	NFC (Type B)	106	0.00	Left	0	0	-
13.56	NFC (Type B)	106	0.00	Top	0	0	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population			Hand 4.0 W/kg Averaged over 10 gram				

13.6 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D04v01.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 10 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was 1.2 W/kg, no additional SAR evaluation using a headset cable were required.
8. Per KDB 648474 D04v01r03, this device is considered a “Phablet” since the diagonal dimension is > 160 mm and < 200 mm. When hotspot mode applies, extremity SAR is required only for the surfaces and edges with hotspot mode scaled to the maximum output power (with tolerance) is 1 g SAR > 1.2 W/kg.
9. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency Band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis.
10. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in
11. tables above. Please see Section 16 for supplemental data..
12. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G and WLAN/BT operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).

GSM/GPRS Test Notes:

1. This EUT’S GSM and GPRS device class is B.
2. This device supports GPRS VOIP in the head and the body-worn configurations therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
4. Per FCC KDB 447498 D04v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D04v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:
   When the reported SAR is 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.
   Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0 for some modes.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D04v01, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S subframes using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink CA was not activated.
9. This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3% using UL-DL configuration 1. Per May TCB Workshop notes, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions.
   This device supports LTE Band 41 ULCA active with Power Class 2. Highest SAR test configuration for each exposure condition in Power Class 3 with ULCA active was repeated with Power Class 2 with ULCA active.
10. SAR test reduction is applied using the following criteria:
    Start with the largest channel Bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel Bandwidths is not required because the reported SAR for the highest channel Bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel Bandwidth.
11. For LTE Band 66, LTE Band 48, and LTE Band 41, per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

NR Notes:

1. This device supports SA and NSA mode for NR implemeatation. In EN-DC Mode, NR operate with the LTE Bands shown in the NR FR1 checklist acting as anchor Bands.
2. Due to Limitations of the SAR measurement equipment, SAR testing for NR and LTE achor Bands was performed separately using test mode (FTM) software.
3. More detailed specifications of the NR Bands are contained in the Technical description document.
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power was evaluated for SAR tests.
6. SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.

WLAN Notes:

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test position are measured.

2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHzWiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11 g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR

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3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHzWiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode was not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.

4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.

5. The device was configured to transmit continuously at the required data rated, channel Bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. BT's DH5 operates at the maximum duty factor declared by the manufacturer and the measurement results are adjusted for a 1% test equipment error tolerance. For more information, please refer to the manufacturer's technical documentation.
2. Head and Bluetooth tethering SAR were evaluated for BT BR tethering applications.

14. Simultaneous SAR Analysis

This device is containing transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D04v01 4.3.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6W/kg for 1g SAR and ≤4 W/kg for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D04v01 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

This device is enabled with Qualcomm® Smart Transmit Gen2 with pre-defined sub6 antenna groups (AG0 and AG1). Simultaneous transmission analysis is performed per antenna groups. Section14.2 contains analysis to demonstrate the AG0 and AG1 are operate mutually exclusive. Additional analysis is provided below to show compliance between AG0 and AG1.

When operating in the same antenna group, Qualcomm Smart Transmit algorithm in WWAN directly adds the time-averaged RF exposure from 4G, PCC and time-averaged RF exposure from 5G NR, SCC. Smart Transmit algorithm controls the total RF exposure from both 4G, PCC and 5G NR, SCC to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G(PCC+SCC) operations within an antenna group is demonstrated in the Part 2 Report during algorithm validation.

14.1 Sub6 Antenna Groups

The 2nd generation of Smart Transmit (GEN2) operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG.
This is accomplished by demonstrating either of below conditions for all exposure scenarios:

a) Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside Smart Transmit is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs.

(or)

b) Every antenna from each sub6 AG meets SPLSR criteria (Section 4.3.2(c) in FCC KDB 447498 D04) with every antenna from another sub6 AG. These criteria must be demonstrated for all antenna combinations for each pair of AGs.

This device supports two sub6 AG: AG0 and AG1, with AG0 having 4 antennas (Main1(A), Main2(B), Main3(C), Main4(D)) and AG1 having 5 antennas (Sub1(E), Sub2(F), Sub4(H), Sub5(I), Sub6(J)), and two WIFI/BT antennas outside of Smart Transmit. The conditions are verified through the following criterias:

i) (Condition#1 Sum of SAR): If SPLSR criteria is not used, then the highest reported SAR at Plimit (or Pmax when Plimit > Pmax) for each antenna should be obtained out of all supported technologies and frequency bands for each DSI. Demonstrate that the sum of reported SAR of one antenna from each of the sub6 AGs and the sum of RF exposure from all supported radios outside of Smart Transmit should be less than the regulatory limit as given below for each DSI.

1. Obtain the worst-case reported SAR for each antenna group (i.e., maximum reported SAR at Plimit (or Pmax when Plimit > Pmax) out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure for each external radio, and demonstrate that the sum of these RF exposures meets:
{ [max.SAR.AG0 + max.SAR.AG1] } ≤ 1.6 (for 1g,or 4.0 for 10g).

ii) (SPLSR criteria): For each antenna, obtain the highest reported SAR value at Plimit out of all supported technologies for each frequency band. Using these values, demonstrate for a given DSI that every antenna from one sub6 AG meets SPLSR criteria with every antenna in another sub6 AG for all frequency bands. This criteria must be demonstrated for all antenna pair combinations irrespective of supported simultaneous transmission scenarios as given
below for each DSI:

a) SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1:
{antenna (Main1(A), Main2(B), Main3(C), Main4(D)) in AG0; antenna (Sub1(E), Sub2(F), Sub4(H), Sub5(I), Sub6(J)) in AG1.
As it can be seen, these include all combinations of antenna groups, antennas, and frequency bands.

iii) (combination of SPLSR & SAR1+SAR2 criteria): If SPLSR criteria for all the combinations of sub6 antenna groups in (i) is demonstrated to show that each AG is mutually exclusive from other AGs, and if the WIFI/BT antennas supported outside of Smart Transmit do not meet SPLSR criteria, then the condition in (ii) reduces to: {max.SAR.AG0 + WIFI/BT Ant 1 + WIFI/BT Ant 2} ≤ 1.6 and {max.SAR.AG1+ WIFI/BT Ant 1 + WIFI/BT Ant 2} ≤ 1.6 for compliance demonstration (for 1g, or 4.0 for 10g).

If SPLSR criteria evaluation and analysis is needed to determine compliance for a certain DSI configuration, SPLSR is performed by taking the highest reported SAR for each of the supported technologies and bands per antenna, along with the peak SAR locations. Per Qualcomm guidance, only Y-axis coordinates are recorded in the analysis for calculation simplicity (assumes all 0mm of separation on the x-axis).

For this device, AG0 is located at the bottom of the device, AG1 is located at the Top of the device.
The minimum distance when considering all transmissions between the top set groups and AG0 was considered when calculating the SPLSR.
The sum of the transmissions within set are less than the SAR limit

For top set (AG1), Y_min coordinate represents the worst case hotspot location that is closest to the AG0.

The following formula is used to calculate the SPLSR between the AG0 and top sets for each exposure configuration:

$$\text{SPLSR} = \frac{(Max\ SAR\ AG0\ +\ Max\ SAR\ Top\ Set)^{1.5}}{|Y_{\max} - Y_{Min}|}$$

14.2 SAR Antenna Group Analysis

14.2.1 Head SAR Antenna Group Analysis

	Left Touch	Left Tilt	Right Touch	Right Tilt
AG0	0.294	0.117	0.143	0.18
AG1	0.954	0.963	1.047	1.155
Summation	1.248	1.080	1.190	1.335

14.2.2 Hotspot SAR Antenna Group Analysis

	Rear	Front	Left	Right	Top	Bottom
AG0	0.839	0.530	0.733	0.242		1.141
AG1	0.711	0.648	0.726	0.575	0.960	
Summation	**1.550**	1.178	1.459	0.817	0.960	1.141

14.2.3 Phablet SAR Antenna Group Analysis

	Rear	Front	Left	Right	Top	Bottom
AG0	N/A	N/A	N/A	N/A		N/A
AG1	1.310	0.626	2.377	0.063	0.230	
Summation	1.310	0.626	2.377	0.063	0.230	0

14.3 Phablet SAR Simultaneous Transmission Analysis

	Rear	Front	Left	Right	Top	Bottom
AG0+AG1	1.31	0.626	2.377	0.063	0.230	0
UWB	0.003	0.001	0.002		0.002	
NFC	0.026	0	0		0	
Summation	1.339	0.627	**2.379**	0.063	0.232	0

Notes.

1. The sum of AG0+AG1+WLAN/BT is less than 1.6 W/kg(1g SAR),4.0 W/kg(10g SAR) there's no further analysis required for compliance demonstration.

14.2.5 Conclusion

The above numerical summed SAR results and SPLSR for all of the combinations of sub6 antenna groups are sufficient to show that AG0 is mutually exclusive from AG1 and that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D04v01 and IEEE 1528- 2013 Section 6.3.4.1.

15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 ㎒ to 6 ㎓, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency Band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency Band:

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.

2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg for 1g SAR or ≥3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Head SAR measurement variability Results

Frequency		Mode/Band	Ant.	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
㎒	Channel						
846.6	4233	UMTS Band 5	E	Left Cheek	0.858	0.767	1.12
793	23330	LTE Band 14	E	Left Tilt(25RB, 0offset)	0.800	0.779	1.03
831.5	26865	LTE Band 26	E	Left Tilt(36RB, 18offset)	0.856	0.834	1.03
2 580	37850	LTE Band 38	F	Right Tilt(50RB, 25offset)	0.999	0.956	1.04
2 535	507000	NR Band n7	F	Right Tilt(CP OFDM,1RB, 1offset)	0.849	0.844	1.01
2 592.99	518598	NR Band n41	F	Right Tilt(DFT-s OFDM,1RB, 1offset)	0.983	0.930	1.06
3 570	638000	NR Band n48	I	Right Cheek (CW-SRS)	0.935	0.931	1.00
1 745	349000	NR Band n66	F	Right Tilt(DFT-s OFDM,216RB, 0offset)	0.898	0.839	1.07
1 702.5	340500	NR Band n70	F	Right Tilt(CP OFDM,1RB, 1offset)	0.953	0.922	1.03
3 500.01	633334	NR Band n77	I	Right Cheek (CW-SRS)	1.04	0.962	1.08

Body/Hotspot SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
1 880	512	GSM1900	Bottom(GPRS 4Tx)	0.860	0.825	1.04
1 852.4	9262	UMTS Band 2	Bottom	0.989	0.992	1.00
1770	132572	LTE Band 66	Bottom(1RB, 0offset)	0.801	0.808	1.01
1 745.0	349000	NR Band n66	Bottom(CP OFDM,1RB, 1offset)	1.030	0.966	1.07
1 702.5	340500	NR Band n70	Bottom(DFT-s OFDM,75RB, 0offset)	0.826	0.819	1.01

16. Antenna Impedance tuner testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 13 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Per FCC Guidance, during NR testing the device was configured with the tuner state selected by the device in LTE mode with auto-tune active at the same frequency. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.
To evaluate all the tuner states, the 144 tuner states were divided among the aggregate band, mode and exposure combinations. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a
particular band/mode/exposure condition, point SAR measurements were made for all 144 states.
The operational description contains more information about the design and implementation of the dynamic antenna tuning.

16.1 Head SAR Configuration

UMTS B5		UMTS B4		UMTS B2		LTE B12	
RMC		RMC		RMC		QPSK, 10 MHz, 1 RB, 24 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	836.6	Frequency (MHz)	1 732.4	Frequency (MHz)	1880	Frequency (MHz)	707.5
Channel	4183	Channel	1412	Channel	9400	Channel	23095
Measured 1g SAR (W/kg)	0.033	Measured 1g SAR (W/kg)	0.139	Measured 1g SAR (W/kg)	0.084	Measured 1g SAR (W/kg)	0.099
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 127)	0.031	Auto-tune (State 121)	0.130	Auto-tune (State 138)	0.082	Auto-tune (State 0)	0.086
Default (State 0)	0	Default (State 0)	0	Default (State 0)	0.079	Default (State 1)	0.073
State 1	0	State 2	0.125	State 7	0.075	State 8	0
State 13	0	State 29	0	State 31	0	State 9	0.051
State 23	0	State 46	0	State 35	0.061	State 16	0.073
State 54	0	State 50	0	State 37	0.060	State 19	0.080
State 64	0	State 65	0	State 49	0	Sate 39	0
State 76	0	State 71	0	State 57	0	State 89	0
State 100	0	State 110	0	State 63	0	State 94	0
State 101	0	State 122	0	State 84	0	State 136	0.086
State 121	0	State 139	0	State 99	0	State 137	0.074

LTE B13		LTE B14		LTE B25		LTE B26	
QPSK, 10 MHz , 1 RB, 0 Offset		QPSK, 10 MHz, 25 RB, 0 RB Offset		QPSK, 20 MHz, 1 RB, 0 Offset		QPSK, 15 MHz, 1 RB, 0 Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	782	Frequency (MHz)	793	Frequency (MHz)	1905	Frequency (MHz)	831.5
Channel	23230	Channel	23330	Channel	26590	Channel	26865
Measured 1g SAR (W/kg)	0.068	Measured 1g SAR (W/kg)	0.047	Measured 1g SAR (W/kg)	0.085	Measured 1g SAR (W/kg)	0.053
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.061	Auto-tune (State 0)	0.030	Auto-tune (State 0)	0.010	Auto-tune (State 0)	0.020
Default (State 2)	0	Default (State 3)	0	Default (State 1)	0	Default (State 2)	0

State 21	0.059	State 5	0	State 3	0	State 11	0
State 36	0	State 17	0	State 24	0	State 22	0
State 38	0	State 32	0	State 27	0	State 25	0
State 80	0	State 48	0.027	State 28	0	State 62	0
State 87	0	State 83	0	State 45	0	State 75	0
State 90	0	State 85	0	State 74	0	State 93	0
State 104	0	State 102	0	State 98	0	State 126	0
State 123	0	State 107	0	State 120	0	State 133	0
State 124	0	State 117	0	State 135	0	State 134	0

LTE B71		LTE B66		NR Band n12		NR Band n25	
QPSK, 20 MHz, 1 RB, 0 Offset		QPSK, 20 MHz, 1 RB, 49 Offset		DFT-s-OFDM QPSK, 15 MHz, 36RB, 22 Offset		DFT-s-OFDM QPSK, 40 MHz, 1RB, 1 offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	683	Frequency (MHz)	1745	Frequency (MHz)	707.5	Frequency (MHz)	1882.5
Channel	133322	Channel	132322	Channel	141500	Channel	376500
Measured 1g SAR (W/kg)	0.082	Measured 1g SAR (W/kg)	0.146	Measured 1g SAR (W/kg)	0.046	Measured 1g SAR (W/kg)	0.129
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.89	Auto-tune (State 16)	0.063	Auto-tune (State 0)	0.033	Auto-tune (State 0)	0.100
Default (State 3)	0	Default (State 0)	0	Default (State 1)	0.032	Default (State 2)	0
State 34	0	State 44	0	State 40	0	State 18	0
State 47	0	State 52	0	State 55	0	State 92	0
State 59	0	State 56	0	State 68	0	State 97	0
State 69	0.081	State 60	0	State 73	0	State 108	0
State 79	0	State 67	0	State 78	0	State 128	0
State 103	0	State 77	0	State 86	0	State 129	0
State 106	0	State 91	0	State 96	0	State 131	0
State 113	0.081	State 127	0	State 112	0	State 132	0
State 116	0.071	State 130	0	State 115	0	State 140	0

NR Band n26		NR Band n66		NR Band n70		NR Band n71	
DFT-s-OFDM QPSK, 20 MHz, 1RB, 1 offset		DFT-s-OFDM QPSK, 40 MHz, 108RB, 54 Offset		DFT-s-OFDM QPSK, 15 MHz, 36RB, 22 offset		DFT-s-OFDM QPSK, 15 MHz, 36RB, 22 offset	
Test Position	Right Touch	Test Position	Left Cheek	Test Position	Left Cheek	Test Position	Right Cheek
Frequency (MHz)	831.5	Frequency (MHz)	1745	Frequency (MHz)	1702.5	Frequency (MHz)	680.5
Channel	166300	Channel	349000	Channel	340500	Channel	136100
Measured 1g SAR (W/kg)	0.061	Measured 1g SAR (W/kg)	0.169	Measured 1g SAR (W/kg)	0.100	Measured 1g SAR (W/kg)	0.055
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.057	Auto-tune (State 16)	0.120	Auto-tune (State 16)	0.097	Auto-tune (State 0)	0.045
Default (State 3)	0.049	Default (State 0)	0	Default (State 0)	0.087	Default (State 1)	0.041
State 6	0.050	State 10	0	State 4	0.082	State 20	0.039
State 41	0	State 15	0	State 12	0.045	State 30	0
State 43	0	State 33	0	State 14	0	State 51	0.040
State 53	0	State 42	0	State 26	0.075	State 81	0.039
State 58	0	State 70	0	State 66	0	State 82	0.034
State 61	0	State 111	0	State 72	0	State 88	0
State 105	0	State 125	0	State 95	0	State 109	0
State 118	0	State 138	0	State 114	0	State 142	0
State 119	0	State 141	0	State 143	0		

16.2 Body SAR Configuration

UMTS B5		UMTS B4		UMTS B2		LTE B12	
RMC		RMC		RMC		QPSK, 10 MHz, 1 RB, 24 RB Offset	
Test Position	Rear	Test Position	Bottom	Test Position	Bottom	Test Position	Rear
Spacing	10mm	Spacing	10mm	Spacing	10mm	Spacing	10mm
Frequency (MHz)	836.6	Frequency (MHz)	1712.4	Frequency (MHz)	1852.4	Frequency (MHz)	707.5
Channel	4183	Channel	1312	Channel	9262	Channel	23095
Measured 1g SAR (W/kg)	0.252	Measured 1g SAR (W/kg)	0.938	Measured 1g SAR (W/kg)	0.767	Measured 1g SAR (W/kg)	0.259
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 127)	0.251	Auto-tune (State 121)	0.926	Auto-tune (State 138)	0.719	Auto-tune (State 0)	0.169
Default (State 0)	0.152	Default (State 0)	0.925	Default (State 0)	0.661	Default (State 1)	0
State 14	0	State 1	0	State 9	0.655	State 15	0
State 48	0.249	State 35	0.264	State 31	0.257	State 29	0.076
State 54	0.064	State 51	0.046	State 72	0	State 36	0.143
State 74	0	State 73	0.272	State 94	0	State 37	0.139
State 76	0	State 104	0	State 96	0.267	Sate 41	0.086
State 84	0.054	State 108	0	State 102	0.041	State 61	0
State 89	0	State 119	0	State 113	0.053	State 62	0
State 101	0.053	State 125	0	State 124	0	State 86	0.158
State 107	0	State 132	0.311	State 138	0.213	State 112	0.166

LTE B13		LTE B14		LTE B25		LTE B26	
QPSK, 10 MHz, 1 RB, 0 RB Offset		QPSK, 10 MHz, 25 RB, 0 RB Offset		QPSK, 20 MHz, 100 RB, 0 RB Offset		QPSK, 15 MHz, 1 RB, 0 RB Offset	
Test Position	Rear	Test Position	Rear	Test Position	Bottom	Test Position	Rear
Spacing	10mm	Spacing	10mm	Spacing	10mm	Spacing	10mm
Frequency (MHz)	782	Frequency (MHz)	793	Frequency (MHz)	1882.5	Frequency (MHz)	831.5
Channel	23230	Channel	23330	Channel	26365	Channel	26865
Measured 1g SAR (W/kg)	0.264	Measured 1g SAR (W/kg)	0.221	Measured 1g SAR (W/kg)	0.623	Measured 1g SAR (W/kg)	0.363
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.200	Auto-tune (State 0)	0.150	Auto-tune (State 0)	0.618	Auto-tune (State 0)	0.195
Default (State 2)	0	Default (State 3)	0.105	Default (State 5)	0	Default (State 3)	0
State 8	0.065	State 4	0.123	State 7	0.593	State 7	0.045
State 18	0.078	State 5	0.121	State 19	0.591	State 10	0
State 20	0.072	State 22	0.096	State 34	0.288	State 43	0
State 49	0.077	State 26	0.052	State 38	0.275	State 53	0
State 79	0	State 103	0	State 47	0	State 88	0
State 109	0	State 105	0	State 55	0	State 92	0
State 111	0	State 110	0	State 67	0.308	State 98	0
State 128	0.088	State 115	0	State 69	0.305	State 118	0
State 134	0.103	State 136	0.109	State 91	0	State 127	0

LTE B71		LTE B66		NR Band n12		NR Band n25	
QPSK, 20 MHz, 1 RB, 0 RB Offset		QPSK, 20 MHz, 1 RB, 0 Offset		DFT-s-OFDM QPSK, 15 MHz, 1RB, 77RB offset		DFT-s-OFDM QPSK, 40 MHz, 108RB, 0 RB	
Test Position	Rear	Test Position	Bottom	Test Position	Rear	Test Position	Bottom
Spacing	10mm	Spacing	10mm	Spacing	10mm	Spacing	10mm
Frequency (MHz)	683	Frequency (MHz)	1770	Frequency (MHz)	707.5	Frequency (MHz)	1882.5
Channel	133322	Channel	132322	Channel	141500	Channel	376500
Measured 1g SAR (W/kg)	0.219	Measured 1g SAR (W/kg)	0.808	Measured 1g SAR (W/kg)	0.138	Measured 1g SAR (W/kg)	0.745
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.215	Auto-tune (State 16)	0.806	Auto-tune (State 0)	0.055	Auto-tune (State 0	0.740
Default (State 4)	0.190	Default (State 0)	0	Default (State 2)	0.043	Default (State 1)	0.731
State 12	0.086	State 44	0.804	State 32	0.031	State 40	0.329
State 33	0.160	State 52	0.489	State 39	0	State 46	0.044
State 56	0.096	State 56	0.326	State 57	0	State 64	0.384
State 58	0.068	State 60	0.295	State 60	0	State 71	0.390
State 68	0.214	State 67	0.076	State 70	0	State 83	0
State 81	0.203	State 91	0.078	State 75	0	State 97	0
State 87	0.106	State 117	0	State 77	0.077	State 123	0
State 93	0	State 127	0	State 116	0	State 126	0
State 114	0.169	State 130	0.040	State 130	0	State 143	0

NR Band n26		NR Band n66		NR Band n70		NR Band n71	
DFT-s-OFDM QPSK, 20 MHz, 1RB, 1RB offset		CP QPSK, 40 MHz, 1RB, 1RB offset		DFT-s-OFDM QPSK, 15 MHz, 1RB, 1 RB		DFT-s-OFDM QPSK, 20 MHz, 50RB, 28 offset	
Test Position	Rear	Test Position	Bottom	Test Position	Bottom	Test Position	Rear
Spacing	10mm	Spacing	10mm	Spacing	10mm	Spacing	10mm
Frequency (MHz)	831.5	Frequency (MHz)	1745	Frequency (MHz)	1702.5	Frequency (MHz)	680.5
Channel	166300	Channel	349000	Channel	340500	Channel	136100
Measured 1g SAR (W/kg)	0.273	Measured 1g SAR (W/kg)	1.040	Measured 1g SAR (W/kg)	0.817	Measured 1g SAR (W/kg)	0.138
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.258	Auto-tune (State 16)	0.825	Auto-tune (State 16)	0.805	Auto-tune (State 0)	0.128
Default (State 10)	0.239	Default (State 0)	0.707	Default (State 0)	0.778	Default (State 2)	0.112
State 16	0.241	State 27	0.656	State 11	0.722	State 3	0.105
State 25	0.232	State 28	0.593	State 44	0.116	State 13	0.104
State 85	0.169	State 42	0.337	State 50	0.051	State 23	0
State 90	0.055	State 59	0	State 52	0.048	State 30	0
State 99	0.141	State 65	0.306	State 63	0	State 92	0
State 122	0	State 82	0	State 66	0.318	State 106	0
State 129	0.243	State 121	0	State 100	0	State 140	0.078
State 135	0.246	State 133	0	State 120	0	State 141	0
State 131	0.237	State 137	0.697	State 142	0		

17. LTE TDD Band 41 Power Class 2 and Power class 3 Linearity

This Device Supports Power Class 2 and Power Class 3 operations for LTE Band 41. The Highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL Configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power class 3. SAR with power class 2 at the highest power and available duty factor was additionally performed for the power class 2 configuration with the Highest SAR for each exposure condition.

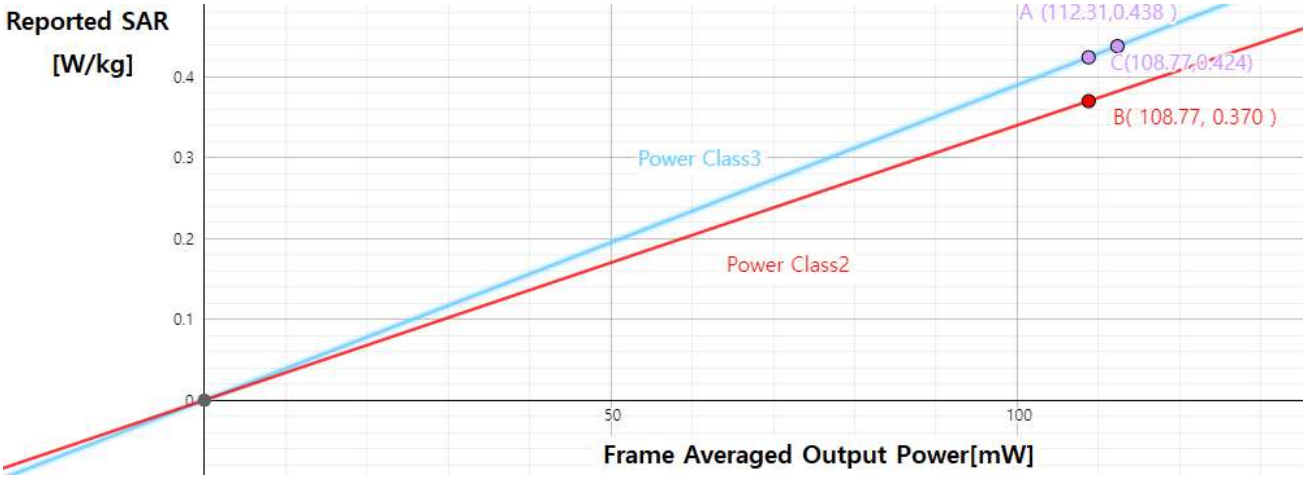
The linearity between the power class 3and Power class 2 SAR Results and the respective frame averaged powers was calculated to determine the results were linear.

Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes as less than 10 % and all reported SAR values were < 1.4 W/kg.

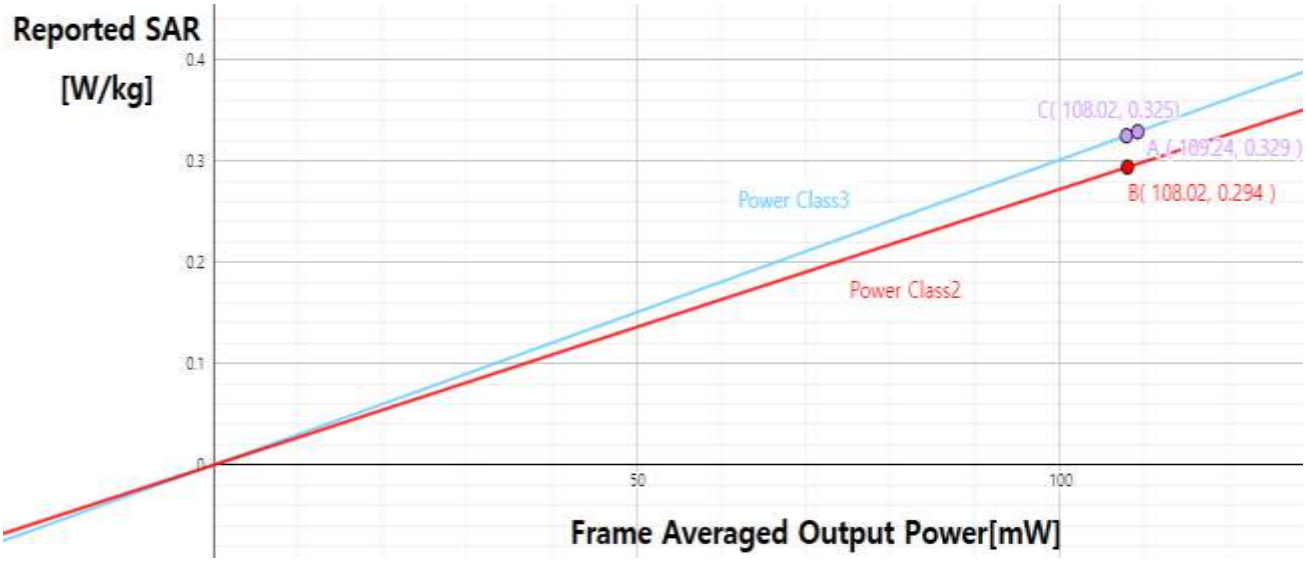
LTE TDD Band 41 Antenna B Head Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	21.4	23
Measured Output Power[dBm]	21.02	22.5
Reported SAR[W/kg]	0.063	0.063
Measured Power[mW]	126.47	177.83
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	80.06	77
% deviation from expected linearity		3.97

LTE TDD Band 41 Antenna B Head ULCA Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	21.4	23
Measured Output Power[dBm]	20.69	22.52
Reported SAR[W/kg]	0.073	0.070
Measured Power[mW]	117.22	178.65
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	74.2	77.36
% deviation from expected linearity		-8.03

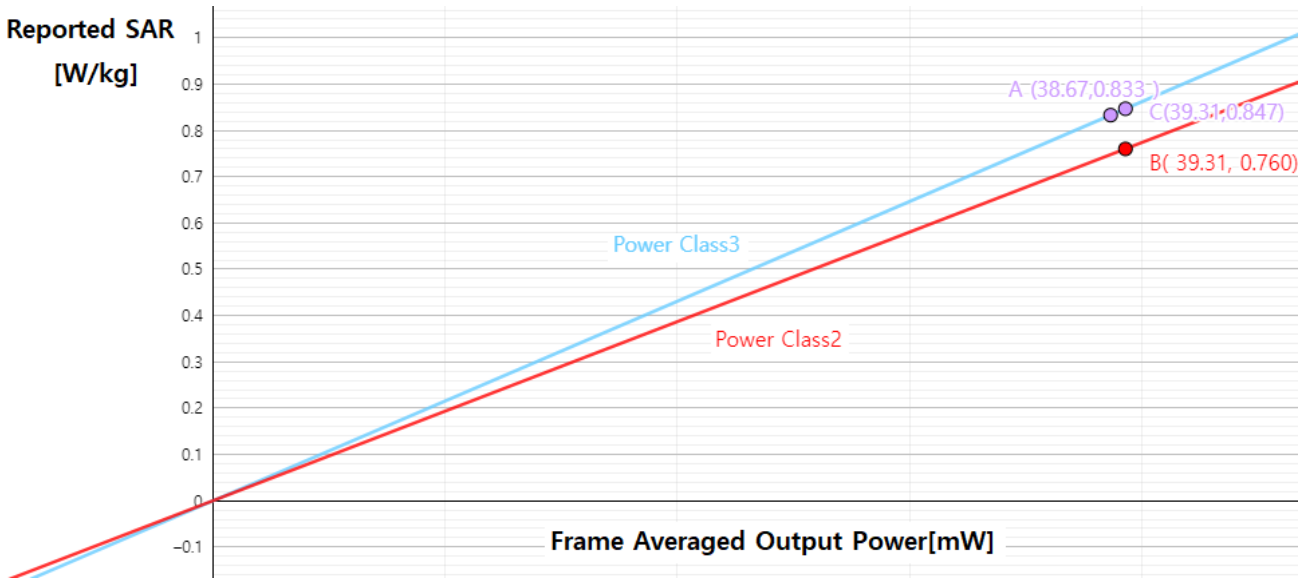
LTE TDD Band 41 Antenna B Body/Hotspot Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	23	24.6
Measured Output Power[dBm]	22.49	24
Reported SAR[W/kg]	0.438	0.370
Measured Power[mW]	177.42	251.19
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	112.31	108.77
% deviation from expected linearity		-12.78



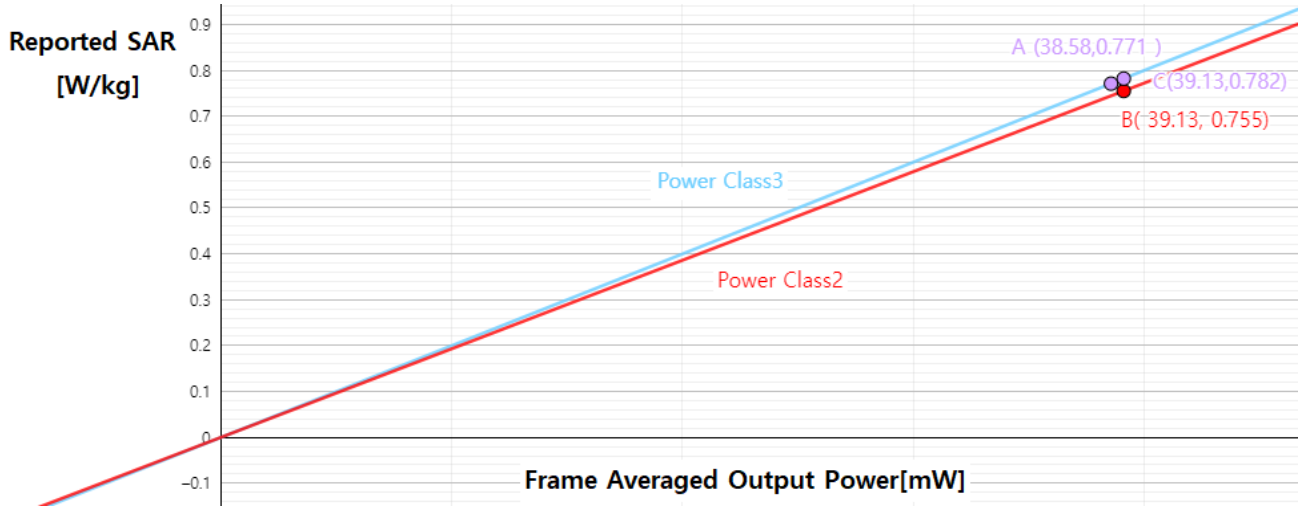
LTE TDD Band 41 Antenna B Body/Hotspot ULCA Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	23	24.6
Measured Output Power[dBm]	22.37	23.97
Reported SAR[W/kg]	0.329	0.294
Measured Power[mW]	172.58	249.46
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	109.24	108.02
% deviation from expected linearity		-9.63



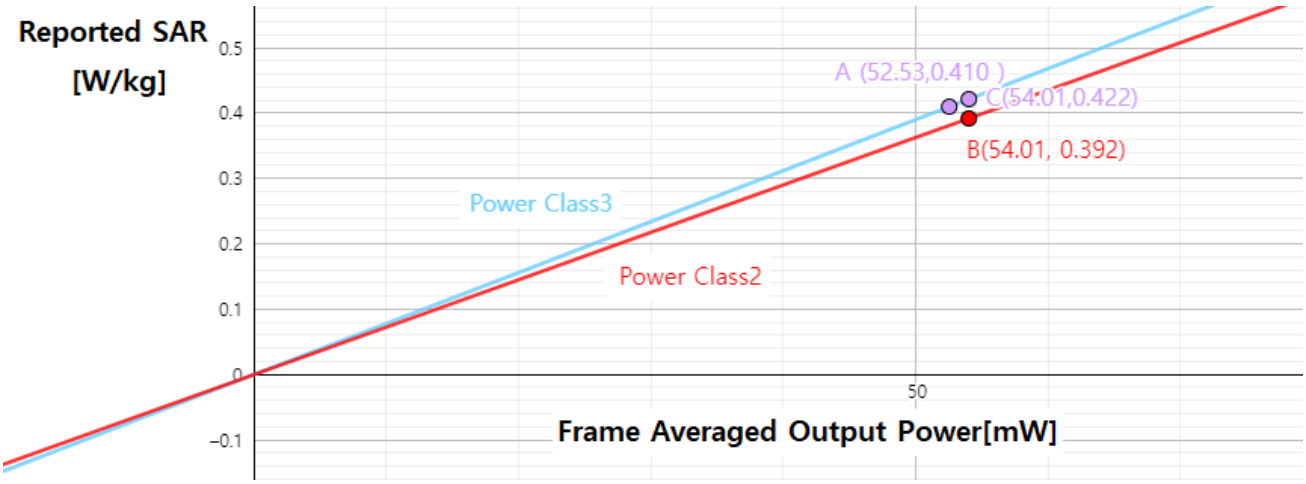
LTE TDD Band 41 Antenna F Head Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	18.5	20.1
Measured Output Power[dBm]	17.86	19.58
Measured SAR[W/kg]	0.833	0.76
Measured Power[mW]	61.09	90.78
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	38.67	39.31
% deviation from expected linearity		-10.25



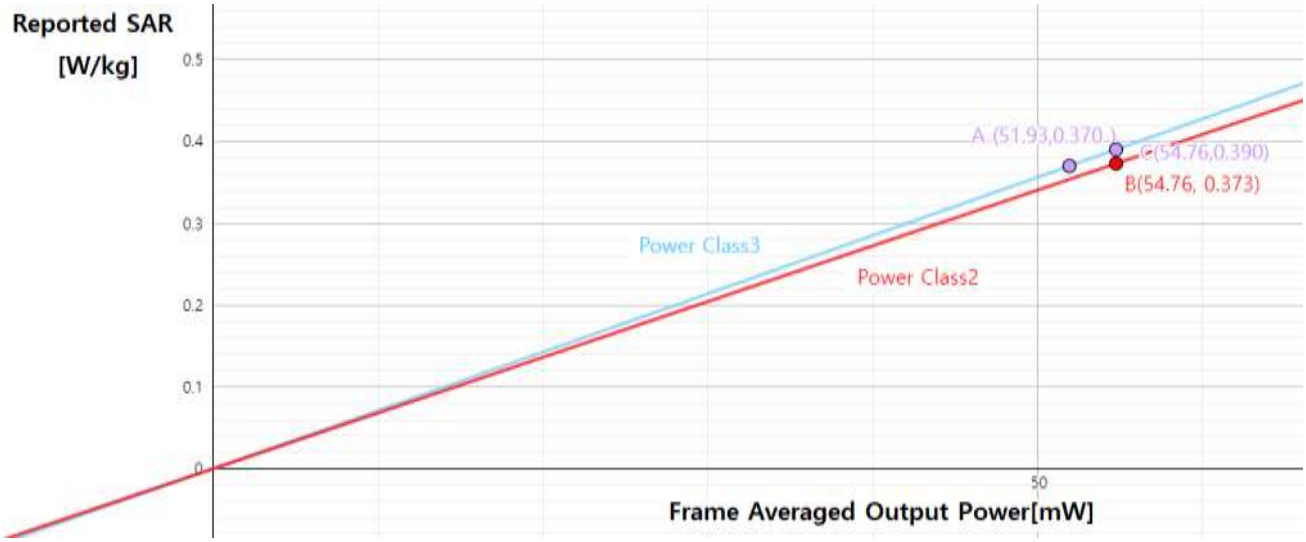
LTE TDD Band 41 Antenna F Head ULCA Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	18.5	20.1
Measured Output Power[dBm]	17.85	19.56
Measured SAR[W/kg]	0.771	0.755
Measured Power[mW]	60.95	90.36
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	38.58	39.13
% deviation from expected linearity		-3.45



LTE TDD Band 41 Antenna F Body/Hotspot Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	20	21.6
Measured Output Power[dBm]	19.19	20.96
Measured SAR[W/kg]	0.410	0.392
Measured Power[mW]	82.99	124.74
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	52.53	54.01
% deviation from expected linearity		-7.01



LTE TDD Band 41 Antenna F Body/Hotspot ULCA Linearity Data Table		
	LTE Band41 PC3	LTE Band41 PC2
Maximum Allowed Output Power[dBm]	20	21.6
Measured Output Power[dBm]	19.14	21.02
Measured SAR[W/kg]	0.370	0.373
Measured Power[mW]	82.04	126.47
Duty Cycle	63.30%	43.30%
Frame Averaged Output Power[mW]	51.93	54.76
% deviation from expected linearity		-4.40



18. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg For 10g SAR for all frequency Bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

19. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59RAA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	CS9spe-TX2-60	F/21/0029002/C/001	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/55B8A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/56W9A1/C/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59RAA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	TX2-60 Lspe	F/21/0029002/A/001	N/A	N/A	N/A
Staubli	TX90 XLspeag	F07/55B8A1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F07/56W9A1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	011578	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0306	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0602	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/29/2022	Annual	12/29/2023
TESTO	175-H1/Thermometer	40331939309	12/29/2022	Annual	12/29/2023
TESTO	175-H1/Thermometer	40331915309	12/29/2022	Annual	12/29/2023
TESTO	608-H1/Thermometer	40331922309	12/29/2022	Annual	12/29/2023
TESTO	608-H1/Thermometer	40332651310	12/29/2022	Annual	12/29/2023
TESTO	608-H1/Thermometer	83348029	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83239085	10/26/2022	Annual	10/26/2023
TESTO	608-H1/Thermometer	83348021	03/27/2023	Annual	03/27/2024
TESTO	608-H1/Thermometer	83406789	03/27/2023	Annual	03/27/2024
SPEAG	DAE4	504	01/10/2023	Annual	01/10/2024
SPEAG	DAE4	466	04/25/2023	Annual	04/25/2024
SPEAG	DAE4	1686	05/23/2023	Annual	05/23/2024
SPEAG	DAE4	1464	06/16/2023	Annual	06/16/2024
SPEAG	DAE4	1417	03/01/2023	Annual	03/01/2024
SPEAG	DAE4	780	07/04/2023	Annual	07/04/2024
SPEAG	DAE4	869	03/23/2023	Annual	03/23/2024
SPEAG	DAE4	1225	03/06/2023	Annual	03/06/2024
SPEAG	DAE4	1687	07/18/2023	Annual	07/18/2024

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	E-Field Probe EX3DV4	3797	01/24/2023	Annual	01/24/2024
SPEAG	E-Field Probe EX3DV4	7679	08/24/2023	Annual	08/24/2024
SPEAG	E-Field Probe EX3DV4	7654	05/24/2023	Annual	05/24/2024
SPEAG	E-Field Probe EX3DV4	7309	06/19/2023	Annual	06/19/2024
SPEAG	E-Field Probe EX3DV4	7622	11/22/2023	Annual	11/22/2024
SPEAG	E-Field Probe EX3DV4	7655	05/25/2023	Annual	05/25/2024
SPEAG	E-Field Probe ES3DV3	3076	07/18/2023	Annual	07/18/2024
SPEAG	E-Field Probe EX3DV4	7370	08/24/2023	Annual	08/24/2024
SPEAG	E-Field Probe EX3DV4	7732	06/20/2023	Annual	06/20/2024
SPEAG	E-Field Probe EX3DV4	3903	07/19/2023	Annual	07/19/2024
SPEAG	E-Field Probe EX3DV4	3768	09/27/2023	Annual	09/27/2024
SPEAG	CLA13	1016	09/21/2023	Annual	09/21/2024
SPEAG	Dipole D750V3	1014	05/23/2023	Annual	05/23/2024
SPEAG	Dipole D835V2	4d165	05/23/2023	Annual	05/23/2024
SPEAG	Dipole D1640V2	345	07/12/2023	Annual	07/12/2024
SPEAG	Dipole D1800V2	2d015	05/17/2023	Annual	05/17/2024
SPEAG	Dipole D1900V2	5d061	01/23/2023	Annual	01/23/2024
SPEAG	Dipole D2300V2	1010	07/19/2023	Annual	07/19/2024
SPEAG	Dipole D2450V2	1049	04/25/2023	Annual	04/25/2024
SPEAG	Dipole D2600V2	1106	05/24/2023	Annual	05/24/2024
SPEAG	Dipole D3300V2	1016	11/22/2022	Annual	11/22/2023
SPEAG	Dipole D3500V2	1040	01/22/2023	Annual	01/22/2024
SPEAG	Dipole D3700V2	1066	11/14/2022	Annual	11/14/2023
SPEAG	Dipole D3900V2	1019	05/19/2023	Annual	05/19/2024
SPEAG	Dipole D5 GHz V2	1317	05/17/2023	Annual	05/17/2024
Agilent	Power Meter E4419B	MY41291386	09/21/2023	Annual	09/21/2024
Agilent	Power Meter N1911A	MY45101406	05/26/2023	Annual	05/26/2024
Agilent	Power Sensor 8481A	SG1091286	09/21/2023	Annual	09/21/2024
H.P	Power Sensor 8481A	MY41090675	09/21/2023	Annual	09/21/2024
Agilent	Wideband Power Sensor N1921A	MY55220026	07/28/2023	Annual	07/28/2024
Agilent	11636B/Power Divider	58698	01/26/2023	Annual	01/26/2024
SPEAG	DAKS 3.5	1038	01/25/2023	Annual	01/25/2024
SPEAG	Vector Reflectometer	00141013	02/13/2023	Annual	02/13/2024
SPEAG	MXA Signal Analyzer	MY49100108	01/13/2023	Annual	01/13/2024
H.P	Network Analyzer /8753ES	JP39240221	01/02/2023	Annual	01/02/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/21/2023	Annual	09/21/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/27/2023	Annual	07/27/2024
R&S	Wireless Communication Test Set CMW500	115733	03/23/2023	Annual	03/23/2024
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/23/2023	Annual	03/23/2024
EMPOWER	RF Power Amplifier	1084	05/26/2023	Annual	05/26/2024
EMPOWER	RF Power Amplifier	1041D/C0508	05/26/2023	Annual	05/26/2024
EMPOWER	RF Power Amplifier	1011	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-15N	10453	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-30N	-	09/21/2023	Annual	09/21/2024
MICRO LAB	LP Filter / LA-60N	32011	09/21/2023	Annual	09/21/2024
Agilent	Attenuator (3dB) 8693B	MY39260298	08/22/2023	Annual	08/22/2024
HP	Attenuator (3dB) 33340A	02427	08/22/2023	Annual	08/22/2024
HP	Attenuator (20dB) 8493C	09271	08/22/2023	Annual	08/22/2024
Agilent	Directional Bridge 86205A	3140A04581	04/25/2023	Annual	04/25/2024
OSI	Power Divider	#3	05/26/2023	Annual	05/26/2024
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/07/2023	Annual	06/07/2024
HP	Dual Directional Coupler	16072	09/21/2023	Annual	09/21/2024

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Anritsu	Radio Communication Test Station MT8000A	6262036812	12/07/2022	Annual	12/07/2023
Anritsu	Radio Communication Tester MT8820C	6201074225	01/25/2023	Annual	01/25/2024
Anritsu	Radio Communication Tester MT8820C	6200695605	03/23/2023	Annual	03/23/2024
Anritsu	Radio Communication Tester MT8821C	6201502997	05/26/2023	Annual	05/26/2024
Anritsu	Radio Communication Tester MT8821C	6262044720	12/07/2022	Annual	12/07/2023
Anritsu	Radio Communication Tester MT8821C	6201664725	01/25/2023	Annual	01/25/2024
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/26/2023	Annual	05/26/2024
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/25/2023	Annual	01/25/2024

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

20. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the abortion and distribution of electromagnetic energy in the body are very complex phenomena the depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

21. References

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[2] ANSI/IEEE C95.1 - 2005 , American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 300 kHz to 300 GHz, New York: IEEE, Sept. 1992

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[21] IEC 62209-2, Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz) Mar. 2010.

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[24] FCC SAR Test procedures for 2G-3G Devices, Mobile Hotspot and UMPC Device KDB 941225 D01.

[25] SAR Measurement Guidance for IEEE 802.11 transmitters, KDB 248227 D01v02r02

[26] SAR Evaluation of Handsets with Multiple Transmitters and Antennas KDB 648474 D03, D04.

[27] SAR Evaluation for Laptop, Notebook, Netbook and Tablet computers KDB 616217 D04.

[28] SAR Measurement and Reporting Requirements for 100 MHz – 6 GHz, KDB 865664 D01, D02.

[29] FCC General RF Exposure Guidance and SAR procedures for Dongles, KDB 447498 D04,D02.

Appendix *A.* DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information &setup photo file no. as follows:

Report No.
HCT-SR-2310-FC006-P