

TEST REPORT

FCC SAR Part 1 Test for SM-A376B/DS
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2512-FC009-R1

DATE OF ISSUE
December 23, 2025

Tested by
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FCC ID

A3LSMA376B

Applicant

SAMSUNG Electronics Co., Ltd

129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, Korea

Product Name
Model Name
Additional Name

Mobile Phone
SM-A376B/DS
SM-A376B

Date of Test

Nov. 18, 2025~ Dec 22, 2025

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing Lab
(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)

FCC Rule Part(s)

CFR § 2.1093

Test Results

PASS (1g SAR Limit : 1.6 W/kg, 10g SAR Limit : 4.0 W/kg)
Refer to the clause 3.2 Attestation of test result

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	December 17 2025	Initial Release
1	December 23 2025	Revised Head SAR Target Power for UMTS Band 5

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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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 D01 General RF Exposure Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- 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 484596 Referencing Test Data v03
- 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)
- April 2018 TCBC Workshop Notes (LTE UL CA, DL CA SAR Test Exclusion)
- April 2022 TCBC Workshop Notes (Sum-Peak Location Separation Ratio)
- October 2024 TCBC Workshop Notes (CA-DL Test Reduction)
- April 2025 TCBC Workshop Note (Portable device Interim guidance)

2. Test Location

2.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of 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-A376B/DS
Additional Model Name	SM-A376B
Equipment Type	Mobile Phone
FCC ID	A3LSMA376B
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

The Highest Reported SAR						
Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)			
			1 g Head	1 g Body Worn	1 g Hotspot	10 g Extremity
GSM/GPRS/EDGE 850	824.2 MHz ~ 848.8 MHz	PCE	0.31	0.97	0.66	N/A
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCE	0.11	0.46	0.42	N/A
UMTS Band 5	826.4 MHz ~ 846.6 MHz	PCE	0.12	0.72	0.72	N/A
UMTS Band 4	1 712.4 MHz ~ 1 752.6 MHz	PCE	<0.10	0.33	0.33	N/A
UMTS Band 2	1 852.4 MHz ~ 1 907.6 MHz	PCE	<0.10	0.58	0.58	N/A
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 5 (Cell)	824.7 MHz ~ 848.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 12	699.7 MHz ~ 715.3 MHz	PCE	0.20	0.45	0.45	N/A
LTE FDD Band 13	779.5 MHz ~ 784.5 MHz	PCE	0.17	0.84	0.84	N/A
LTE FDD Band 17	706.5 MHz ~ 713.5 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCE	0.53	0.72	0.72	N/A
LTE FDD Band 26 (Cell)	814.7 MHz ~ 848.3 MHz	PCE	0.16	0.79	0.79	N/A
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCE	<0.10	0.86	0.86	N/A
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCE	0.69	0.62	0.62	N/A
NR FDD Band n5	826.5 MHz ~ 846.5 MHz	PCE	0.14	0.74	0.74	N/A
NR TDD Band n41	2 506.02 MHz ~ 2 679.99 MHz	PCE	0.66	0.91	0.91	N/A
NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz	PCE	0.69	0.62	0.62	N/A
NR TDD Band n77	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCE	0.57	0.51	0.51	N/A
2.4 GHz WLAN	2 412 MHz ~ 2 472 MHz	DTS	0.43	0.54	0.54	N/A
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A	N/A	N/A	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	0.23	0.39	N/A	0.70
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.25	0.35	N/A	0.98
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.24	0.21	0.23	N/A
U-NII-4	5 845 MHz ~ 5 885 MHz	NII	0.23	0.22	N/A	0.58
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS/DTS	0.32	0.36	0.36	N/A
NFC	13.56 MHz	DXX	N/A	N/A	N/A	<0.10
Simultaneous SAR per KDB 690783 D01v01r03			1.56	1.38	1.28	0.98
Date(s) of Tests:			Nov. 18, 2025 ~ Dec. 13, 2025			

Summary table of SAR measurement results		
SAR test Configuration	The Highest SAR (W/kg)	Distance (mm)
Head SAR	0.69	
Body-worn accessory	0.97	5
Product specific (wireless router)	0.91	5,10
Extremity	0.98	0
Simultaneous transmission	1.56	

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 17	Voice / Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
NR FDD Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR TDD Band n41	Voice / Data	2 501.01 MHz ~ 2 685 MHz
NR FDD Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR TDD Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Voice / Data	3 445.01 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
U-NII-4	Voice / Data	5 845 MHz ~ 5 885 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 472 MHz
Bluetooth / LE 5.4	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
Device Description		
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900, UMTS Band 2,4,5, NFC	YJV0363M, YJV0348M, YJV0351M
	LTE Band 5,12,13,25,26,66 NR Band n5, n66	
	LTE Band 41 NR Band n41, n41 SRS2, n41 SRS3, n41 SRS 4	
	WLAN 2.4G, 5G, BT	YJV0411M, YJV0352M
	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 WWAN Mode of DUT is equipped with an S.LSI chipset to which the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm is applied. and also this equipment contains the Qualcomm modem supporting Qualcomm Fast Connect TAS for WLAN.

This DUT is enabled with the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm for WWAN Mode and also Qualcomm Fast Connect TAS feature for WLAN Mode to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement

The Samsung S.LSI proprietary TAS 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), for each characterized technology and band (see SAR Part 0 Test Report for sub 6GHz).

FCC RF exposure limit is based on time averaged RF exposure. The SAR regulatory specification is defined over certain measurement duration allowing for time-averaging. The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm has been designed to meet the compliance limits over the required duration, while still allowing dynamic control of transmit power to satisfy the performance of the system.

This feature performs time averaging SAR algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is compliance with FCC requirements all the time.

The WLAN mode are not controlled by The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm. This equipment contains the Qualcomm modem supporting Qualcomm Fast Connect TAS algorithm for TAS operations This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is compliance with FCC requirements all the time. DUT contains BDF File configured for the Qualcomm Fast Connect TAS algorithm. Only the BT mode of the device did not apply the time averaged SAR algorithm.

The Samsung S.LSI TAS algorithm and Qualcomm Fast Connect TAS algorithm allow 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 NV settings and maximum tune up output power Pmax configured for this DUT for various transmit conditions (Radio SAR index RSI for Head /Body SAR of WWAN Mode, Device State Index DSI for WLAN mode).

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

The purpose of this report is to demonstrate that the DUT meets FCC SAR limits when transmitting in static transmission configurations at Plimit specified by manufacturer.

Measurement Condition: All conducted power and SAR measurements in this report were performed by Plimit in static Power condition.

4.3 SAR Characterization

SAR test results corresponding to Pmax for each antenna/technology/band/RSI can be found in Appendix A. Plimit is calculated by linearly scaling with the measured SAR at the Pmax to correspond to the SAR_design_target. Plimit determination for each exposure scenario corresponding to SAR_design_target are shown in Table 4-1

Plim values in green indicate Plimit < Pmax			Plim values in grey indicate Plimit > Pmax				Pmax
Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target							
SAR Exposure Position			Bodyworn (Non-Head)	Head (RCV ON)	Hotspot	Phablet	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume			1g	1g	1g	10g	
separation Distance			5 mm	0 mm	5 mm / 10mm	0 mm	
Mode	Band	Antenna	RSI=0	RSI=1	RSI=0	RSI=0	
GSM/GPRS/EDGE	850	A	21.5	31.4	21.5	21.5	25.3
GSM/GPRS/EDGE	1900	B	18.0	33.2	18.0	18.0	22.6
UMTS	2	B	18.0	37.6	18.0	18.0	24.0
UMTS	4	B	19.0	38.2	19.0	19.0	24.0
UMTS	5	A	21.5	24.0	21.5	21.5	24.5
LTE FDD	12	A	22.0	32.4	22.0	22.0	24.5
LTE FDD	13	A	23.5	32.8	23.5	23.5	24.0
LTE FDD	25/2	B	18.0	32.1	18.0	18.0	24.0
LTE FDD	25/2	F	18.0	17.0	18.0	18.0	24.0
LTE FDD	26	A	21.5	33.5	21.5	21.5	24.5
LTE TDD	41	B	17.5	33.0	17.5	17.5	22.0
LTE FDD	66/4	B	18.0	31.7	18.0	18.0	24.0
LTE FDD	66/4	F	17.0	17.0	17.0	17.0	24.0
NR FDD	5	A	21.5	34.2	21.5	21.5	24.5
NR TDD	41	B	17.5	17.5	17.5	17.5	24.0
NR TDD	41	F	17.5	17.5	17.5	17.5	21.0
NR TDD	41	H	17.5	17.5	17.5	17.5	20.0
NR TDD	41	E	17.5	17.5	17.5	17.5	19.0
NR FDD	66	B	18.0	34.3	18.0	18.0	24.0
NR FDD	66	F	17.0	17.0	17.0	17.0	24.0
NR TDD	77	G	15.0	14.0	15.0	15.0	26.0
NR TDD	77 DOD	G	15.0	14.0	15.0	15.0	26.0

Plim values in green indicate Plimit < Pmax Plim values in grey indicate Plimit > Pmax							
Plimit corresponding to 0.8 W/kg (1g) 2.0W/kg(10g) SAR_Design_target							Pmax
SAR Exposure Position			Bodyworn (Non-Head)	Head (RCV ON)	Hotspot	Phablet	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume			1g	1g	1g	10g	
separation Distance			5 mm	0 mm	5 mm/10mm	0 mm	
Mode	Band	Antenna	RSI=0	RSI=1	RSI=0	RSI=0	
WLAN	2.4	H	14.0	13.0	14.0	14.0	17.0
WLAN	2.4	H+J	17.0	16.0	17.0	17.0	20.0
WLAN	5	G	11.0	8.0	11.0	11.0	15.0
WLAN	5	G+I	14.0	11.0	14.0	14.0	18.0
BT	2.4	H	17.5	11.0	17.5	18.3	13.0

Table 4-1 SAR Characterization

Note

1. all Plimit 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 modulation schemes (for e.g., GSM, LTE TDD, 5G NR TDD).
2. The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G WWAN and WLAN technology, band, and SAR Exposure condition = minimum of "Plimit" and "Maximum tune up output power: "Pmax" + 1dB device uncertainty.
3. The maximum time averaged output power means Plimit for each mode SAR values in this report were scaled to the maximum allowed output power to determine compliance per KDB Publication 447498 D01v06.
4. Bluetooth operate on the peak power mode.

4.4 Power Reduction for SAR

In this model, the output Power of the DUT in WWAN mode is controlled by the application of The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm, with the output Power depending on the RSI of the predefined DUT.

4.4.1 Nominal and Maximum 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 D01v06.

4.4.1.1 2G/3G/4G/5G Nominal Output Power

A. GSM Modes

GSM/GPRS/EDGE 850_Antenna A									
Power Level	Voice (dBm)	Data - Burst Average GMSK (dBm)				Data - Burst Average 8-PSK (dBm)			
	1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	33.0	33.0	31.5	29.5	28.5	27.0	25.0	23.0	22.0
RSI = 0 (Non Head)	30.7	30.7	27.7	25.9	24.7	27.0	25.0	23.0	22.0
RSI = 1 (Head)	33.0	33.0	31.5	29.5	28.5	27.0	25.0	23.0	22.0

GSM/GPRS/EDGE 1900									
Power Level	Voice (dBm)	Data - Burst Average GMSK (dBm)				Data - Burst Average 8-PSK (dBm)			
	1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	30.5	30.5	28.5	27.0	25.0	26.0	24.0	22.0	21.0
RSI = 0 (Non Head)	27.2	27.2	24.2	22.4	21.2	26.0	24.0	22.0	21.0
RSI = 1 (Head)	30.5	30.5	28.5	27.0	25.0	26.0	24.0	22.0	21.0

Tolerance: -1.5 dB ~ +1.0 dB

B. UMTS Modes

UMTS Band 5 (850 MHz)_Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.5	23.5	23.5	23.5
RSI = 0 (Non Head)	21.5	20.5	20.5	20.5
RSI = 1 (Head)	24.0	23.0	23.0	23.0

UMTS Band 4 (1 750 MHz)_Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.0	23.0	23.0	23.0
RSI = 0 (Non Head)	19.0	18.0	18.0	18.0
RSI = 1 (Head)	24.0	23.0	23.0	23.0

UMTS Band 2 (1 900 MHz)_ Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.0	23.0	23.0	23.0
RSI = 0 (Non Head)	18.0	17.0	17.0	17.0
RSI = 1 (Head)	24.0	23.0	23.0	23.0

Tolerance: -1.5 dB ~ +1.0 dB

C. LTE Modes

Mode / Band	Antenna	Modulated Average Output Power (dBm)		
		Pmax	RSI = 0 (Free)	RSI = 1 (RCV)
LTE Band 12	A	24.5	22.0	24.5
LTE Band 13	A	24.0	23.5	24.0
LTE Band 17	A	24.5	22.0	24.5
LTE Band 26	A	24.5	21.5	24.5
LTE Band 5	A	24.5	21.5	24.5
LTE Band 66	B	24.0	18.0	24.0
LTE Band 66	F	24.0	17.0	17.0
LTE Band 4	B	24.0	18.0	24.0
LTE Band 4	F	24.0	17.0	17.0
LTE Band 25	B	24.0	18.0	24.0
LTE Band 25	F	24.0	18.0	17.0
LTE Band 2	B	24.0	18.0	24.0
LTE Band 2	F	24.0	18.0	17.0
LTE Band 41(PC3)	B	24.0	19.5	24.0

Tolerance: -1.5 dB ~ +1.0 dB

D. 5G NR SUB 6

Mode / Band	Antenna	Modulated Average Output Power (dBm)		
		Pmax	RSI = 0 (Free)	RSI = 1 (RCV)
NR Band n5	A	24.5	21.5	24.5
NR Band n66	B	24.0	18.0	24.0
NR Band n66	F	24.0	17.0	17.0
NR Band n41	B	24.0	17.5	17.5
NR Band n41	F	21.0	17.5	17.5
NR Band n41	H	20.0	17.5	17.5
NR Band n41	E	19.0	17.5	17.5
NR Band n77	G	26.0	15.0	14.0

Tolerance: -1.5 dB ~ +1.0 dB

4.4.1.2 Maximum 2.4 GHz, 5 GHz WIFI output power

a. Maximum Power

Mode	Band	SISO(ANT 1)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		17	15 Ch1 12.5 Ch10 14 Ch11 12.5	15 Ch1 12.5 Ch10 14 Ch11 12.5		15 Ch1 12.5 Ch10 14 Ch11 12.5		20	18 Ch1 15.5 Ch10 17 Ch11 15.5	18 Ch1 15.5 Ch10 17 Ch11 15.5		18 Ch1 15.5 Ch10 17 Ch11 15.5
5GHZ (20MHz)	UNII 1	15 Ch36 14.5			15 Ch36 14.5	15 Ch36 14.5	15 Ch36 14.5	18 Ch36 17.5			18 Ch36 17.5	18 Ch36 17.5	18 Ch36 17.5
	UNII 2A	15 Ch56 14 Ch60 14 Ch64 11.5			15 Ch56 14 Ch60 14 Ch64 11.5	15 Ch56 14 Ch60 14 Ch64 11.5	15 Ch56 14 Ch60 14 Ch64 11.5	18 Ch56 17 Ch60 17 Ch64 14.5			18 Ch56 17 Ch60 17 Ch64 14.5	18 Ch56 17 Ch60 17 Ch64 14.5	18 Ch56 17 Ch60 17 Ch64 14.5
	UNII 2C	15 Ch100 10 Ch140 12.5			15 Ch100 10 Ch140 12.5	15 Ch100 10 Ch140 12.5	15 Ch100 10 Ch140 12.5	18 Ch100 13 Ch140 15.5			18 Ch100 13 Ch140 15.5	18 Ch100 13 Ch140 15.5	18 Ch100 13 Ch140 15.5
	UNII 3	11			11	11	11	14			14	14	14
	UNII 4	11			11	11	11	14			14	14	14
5GHZ (40MHz)	UNII 1				14 Ch38 11	14 Ch38 11	14 Ch38 11				17 Ch38 14	17 Ch38 14	17 Ch38 14
	UNII 2A				14 Ch62 10	14 Ch62 10	14 Ch62 10				17 Ch62 13	17 Ch62 13	17 Ch62 13
	UNII 2C				14 Ch102 11.5 Ch134 11	14 Ch102 11.5 Ch134 11	14 Ch102 11.5 Ch134 11				17 Ch102 14.5 Ch134 14	17 Ch102 14.5 Ch134 14	17 Ch102 14.5 Ch134 14
	UNII 3				11	11	11				14	14	14
	UNII 4				11	11	11				14	14	14
5GHZ (80MHz)	UNII 1					13 Ch42 11	13 Ch42 11					16 Ch42 14	16 Ch42 14
	UNII 2A					13 Ch58 9.5	13 Ch58 9.5					16 Ch58 12.5	16 Ch58 12.5
	UNII 2C					13 Ch106 10.5	13 Ch106 10.5					16 Ch106 13.5	16 Ch106 13.5
	UNII 3					11	11					14	14
	UNII 4					11	11					14	14

(Upper Tolerance: target +1.0 dB)

b. Reduced Power – Plimit Body (RSI=0)

Mode	Band	SISO(ANT 1)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		14	14 Ch1 12.5 Ch11 12.5	14 Ch1 12.5 Ch11 12.5		14 Ch1 12.5 Ch11 12.5		17	17 Ch1 15.5 Ch11 15.5	17 Ch1 15.5 Ch11 15.5		17 Ch1 15.5 Ch11 15.5
5GHZ (20MHz)	UNII 1	11			11	11	11	14			14	14	14
	UNII 2A	11			11	11	11	14			14	14	14
	UNII 2C	11 Ch100 10			11 Ch100 10	11 Ch100 10	11 Ch100 10	14 Ch100 13			14 Ch100 13	14 Ch100 13	14 Ch100 13
	UNII 3	11			11	11	11	14			14	14	14
	UNII 4	11			11	11	11	14			14	14	14
5GHZ (40MHz)	UNII 1				11	11	11				14	14	14
	UNII 2A				11 Ch62 10	11 Ch62 10	11 Ch62 10				14 Ch62 13	14 Ch62 13	14 Ch62 13
	UNII 2C				11	11	11				14	14	14
	UNII 3				11	11	11				14	14	14
	UNII 4				11	11	11				14	14	14
5GHZ (80MHz)	UNII 1					11	11					14	14
	UNII 2A					11 Ch58 9.5	11 Ch58 9.5					14 Ch58 12.5	14 Ch58 12.5
	UNII 2C					11 Ch106 10.5	11 Ch106 10.5					14 Ch106 13.5	14 Ch106 13.5
	UNII 3					11	11					14	14
	UNII 4					11	11					14	14

(Upper Tolerance: target +1.0 dB)

C. Reduced Power – Plimit Head (RSI=1)

Mode	Band	SISO(ANT 1)						MIMO					
		a	b	g	n	ac	ax(SU)	a	b	g	n	ac	ax(SU)
2.4GHz	2.45GHz		13	13 Ch1 12.5 Ch11 12.5	13 Ch1 12.5 Ch11 12.5		13 Ch1 12.5 Ch11 12.5		16	16 Ch1 15.5 Ch11 15.5	16 Ch1 15.5 Ch11 15.5		16 Ch1 15.5 Ch11 15.5
5GHZ (20MHz)	UNII 1	8			8	8	8	11			11	11	11
	UNII 2A	8			8	8	8	11			11	11	11
	UNII 2C	8			8	8	8	11			11	11	11
	UNII 3	8			8	8	8	11			11	11	11
	UNII 4	8			8	8	8	11			11	11	11
5GHZ (40MHz)	UNII 1				8	8	8				11	11	11
	UNII 2A				8	8	8				11	11	11
	UNII 2C				8	8	8				11	11	11
	UNII 3				8	8	8				11	11	11
	UNII 4				8	8	8				11	11	11
5GHZ (80MHz)	UNII 1					8	8					11	11
	UNII 2A					8	8					11	11
	UNII 2C					8	8					11	11
	UNII 3					8	8					11	11
	UNII 4					8	8					11	11

(Upper Tolerance: target +1.0 dB)

d. 11ax RU Tx power Tables (Pmax)

	Band	SISO(ANT 1)						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	2.45GHz	8	11	14 Ch1 12.5 Ch11 12.5	15 Ch1 12.5 Ch10 14 Ch11 12.5			11	14	17 Ch1 15.5 Ch11 15.5	18 Ch1 15.5 Ch10 17 Ch11 15.5		
5G 20MHz	UNII 1	6	9	12	15 Ch36 14.5			9	12	15	18 Ch36 17.5		
	UNII 2A	6	9	12 Ch64 11.5	15 Ch56 14 Ch60 14 Ch64 11.5			9	12	15	18 Ch56 17 Ch60 17 Ch64 14.5		
	UNII 2C	6	9	12 Ch100 10	15 Ch100 10 Ch140 12.5			9	12	15 Ch100 13	18 Ch100 13 Ch140 15.5		
	UNII 3	6	9	11	11			9	12	14	14		
	UNII 4	6	9	11	11			9	12	14	14		
5G 40MHz	UNII 1	6	9	12 Ch38 11	14 Ch38 11	14 Ch38 11		9	12	15 Ch38 14	17 Ch38 14	17 Ch38 14	
	UNII 2A	6	9	12 Ch62 10	14 Ch62 10	14 Ch62 10		9	12	15 Ch62 13	17 Ch62 13	17 Ch62 13	
	UNII 2C	6	9	12 Ch102 11.5 Ch134 11	14 Ch102 11.5 Ch134 11	14 Ch102 11.5 Ch134 11		9	12	15 Ch102 14.5 Ch134 14	17 Ch102 14.5 Ch134 14	17 Ch102 14.5 Ch134 14	
	UNII 3	6	9	11	11	11		9	12	14	14	14	
	UNII 4	6	9	11	11	11		9	12	14	14	14	
5G 80MHz	UNII 1	6	9	12 Ch42 11	13 Ch42 11	13 Ch42 11	13 Ch42 11	9	12	15 Ch42 14	16 Ch42 14	16 Ch42 14	16 Ch42 14
	UNII 2A	6	9	12 Ch58 9.5	13 Ch58 9.5	13 Ch58 9.5	13 Ch58 9.5	9	12	15 Ch58 12.5	16 Ch58 12.5	16 Ch58 12.5	16 Ch58 12.5
	UNII 2C	6	9	12 Ch106 10.5	13 Ch106 10.5	13 Ch106 10.5	13 Ch106 10.5	9	12	15 Ch106 13.5	16 Ch106 13.5	16 Ch106 13.5	16 Ch106 13.5
	UNII 3	6	9	11	11	11	11	9	12	14	14	14	14
	UNII 4	6	9	11	11	11	11	9	12	14	14	14	14

(Upper tolerance: target +1.0dB)

e. 11ax RU Plimit Tables – Body (RSI = 0)

	Band	SISO(ANT 1)						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	2.45GHz	8 Ch10 6 Ch11 3.5	11	14	14 Ch1 12 Ch11 11.5			11 Ch10 9 Ch11 6.5	14	17	17 Ch1 12 Ch11 11.5		
5G 20MHz	UNII 1	6	9	11	11			9	12	14	14		
	UNII 2A	6	9	11	11			9	12	14	14		
	UNII 2C	6	9	11 Ch100 10	11 Ch100 10			9	12	14 Ch100 13	14 Ch100 13		
	UNII 3	6	9	11	11			9	12	14	14		
	UNII 4	6	9	11	11			9	12	14	14		
5G 40MHz	UNII 1	6	9	11	11	11		9	12	14	14	14	
	UNII 2A	6	9	11 Ch62 10	11 Ch62 10	11 Ch62 10		9	12	14 Ch62 13	14 Ch62 13	14 Ch62 13	
	UNII 2C	6	9	11	11	11		9	12	14	14	14	
	UNII 3	6	9	11	11	11		9	12	14	14	14	
	UNII 4	6	9	11	11	11		9	12	14	14	14	
5G 80MHz	UNII 1	6	9	11	11	11	11	9	12	14	14	14	14
	UNII 2A	6	9	11 Ch58 9.5	11 Ch58 9.5	11 Ch58 9.5	11 Ch58 9.5	9	12	14 Ch58 12.5	14 Ch58 12.5	14 Ch58 12.5	14 Ch58 12.5
	UNII 2C	6	9	11 Ch106 10.5	11 Ch106 10.5	11 Ch106 10.5	11 Ch106 10.5	9	12	14 Ch106 13.5	14 Ch106 13.5	14 Ch106 13.5	14 Ch106 13.5
	UNII 3	6	9	11	11	11	11	9	12	14	14	14	14
	UNII 4	6	9	11	11	11	11	9	12	14	14	14	14

(Upper tolerance: target +1.0dB)

e. 11ax RU Plimit Tables –Head (RSI = 1)

	Band	SISO(ANT 1)						MIMO					
		26T	52T	106T	242T	484T	996T	26T	52T	106T	242T	484T	996T
2.4GHz	2.45GHz	8 Ch10 6 Ch11 3.5	11	13	13 Ch1 12 Ch11 11.5			11 Ch10 9 Ch11 6.5	14	16	16 Ch1 12 Ch11 11.5		
5G 20MHz	UNII 1	6	8	8	8			9	11	11	11		
	UNII 2A	6	8	8	8			9	11	11	11		
	UNII 2C	6	8	8	8			9	11	11	11		
	UNII 3	6	8	8	8			9	11	11	11		
	UNII 4	6	8	8	8			9	11	11	11		
5G 40MHz	UNII 1	6	8	8	8	8		9	11	11	11	11	
	UNII 2A	6	8	8	8	8		9	11	11	11	11	
	UNII 2C	6	8	8	8	8		9	11	11	11	11	
	UNII 3	6	8	8	8	8		9	11	11	11	11	
	UNII 4	6	8	8	8	8		9	11	11	11	11	
5G 80MHz	UNII 1	6	8	8	8	8	8	9	11	11	11	11	11
	UNII 2A	6	8	8	8	8	8	9	11	11	11	11	11
	UNII 2C	6	8	8	8	8	8	9	11	11	11	11	11
	UNII 3	6	8	8	8	8	8	9	11	11	11	11	11
	UNII 4	6	8	8	8	8	8	9	11	11	11	11	11

(Upper tolerance: target +1.0dB)

4.4.1.3 Bluetooth output power

a. Bluetooth Maximum Output Power in Conducted Mode

MODE	DATA RATE	ANT1
BDR(in dBm)	1Mbps	13
EDR(in dBm)	2Mbps	11
	3Mbps	11
LE	1M	13
	2M	13
	125K	12
	500k	12

(Upper tolerance: target +1.0dB)

b. Bluetooth Reduced Free Output Power in Conducted Mode

MODE	DATA RATE	ANT1
BDR(in dBm)	1Mbps	13
EDR(in dBm)	2Mbps	11
	3Mbps	11
LE	1M	13
	2M	13
	125K	12
	500k	12

(Upper tolerance: target +1.0dB)

C. Bluetooth Reduced RCV Output Power in Conducted Mode

MODE	DATA RATE	ANT1
BDR(in dBm)	1Mbps	10
EDR(in dBm)	2Mbps	11
	3Mbps	11
LE	1M	11
	2M	11
	125K	11
	500k	11

(Upper tolerance: target +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 12	699.7 MHz ~ 715.3 MHz
	LTE FDD Band 13	779.5 MHz ~ 784.5 MHz
	LTE FDD Band 17	706.5 MHz ~ 713.5 MHz
	LTE FDD Band 25	1 850.7 MHz ~ 1 914.3 MHz
	LTE FDD Band 26	814.7 MHz ~ 848.3 MHz
	LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz
	LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 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 12	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE FDD Band 13	5 MHz, 10 MHz
	LTE FDD Band 17	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 TDD Band 41	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

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		1 732.5 (20175)	
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		836.5 (20525)	
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		707.5 (23095)	
LTE FDD Band 13	5 MHz		782 (23230)	
	10 MHz		782 (23230)	
LTE FDD Band 17	5 MHz		710 (23790)	
	10 MHz		710 (23790)	
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		831.5 (26865)	

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid			Mid-High / High	
LTE FDD Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)			1 779.3 (132665)	
	3 MHz	1 711.5 (131987)		1 745 (132322)			1 778.5 (132657)	
	5 MHz	1 712.5 (131997)		1 745 (132322)			1 777.5 (132647)	
	10 MHz	1 715.0 (132022)		1 745 (132322)			1 775.0 (132622)	
	15 MHz	1 717.5 (132047)		1 745 (132322)			1 772.5 (132597)	
	20 MHz	1 720.0 (132072)		1 745 (132322)			1 770.0 (132572)	
LTE TDD Band 41	5 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)		
	10 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)		
	15 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)		
	20 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)		
UE Category		LTE Rel. 16, DL: Category 20, UL: Category 18						
HPUE Power Class		N/A						
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 inter-Band UL-link Carrier aggregations.						
LTE Release information		This device does not support full CA features on 3GPP Release 16. It supports carrier aggregation, downlink MIMO. All other uplink communications are identical to the release 8 specifications. The following LTE Release 16 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.						

4.6 5G NR SUB 6 Information

Item.		Description
Frequency Range	NR FDD Band n5	826.5 MHz ~ 846.5 MHz
	NR TDD Band n41	2 501.01 MHz ~ 2 685 MHz
	NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz
	NR TDD Band n77	3 705 MHz ~ 3 975 MHz
	NR TDD Band n77 DoD	3 445.01 MHz ~ 3 544.98 MHz
Channel Bandwidths	NR FDD Band n5	5 MHz, 10 MHz, 15 MHz, 20 MHz
	NR TDD Band n41	10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR FDD Band n66	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 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

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High	
NR FDD Band n5 (Cell)	5 MHz	826.5 (165300)		836.5(167300)		846.5 (169300)	
	10 MHz			836.5(167300)			
	15 MHz			836.5(167300)			
	20 MHz			836.5(167300)			
NR TDD Band n41	10 MHz	2 501.01(500202)	2 547(509400)	2 592.99(518598)	2 639.01(527802)	2 685(537000)	
	15 MHz	2 503.5(500700)	2 548.26(509652)	2 592.99(518598)	2 637.75(527550)	2 682.51(536502)	
	20 MHz	2 506.02(501204)	2 549.49(509898)	2 592.99(518598)	2 636.49(527298)	2 679.99(535998)	
	30 MHz	2 511(502200)	2 552.01(510402)	2 592.99(518598)	2 634(526800)	2 674.98(534996)	
	40 MHz	2 516.01(503202)	2 567.34(513468)		2 618.67(523734)	2 670(534000)	
	50 MHz	2 521.02(504204)		2 592.99(518598)		2 664.99(532998)	
	60 MHz	2 526(505200)		2 592.99(518598)		2 659.98(531996)	
	70 MHz	2 531.01(506202)				2 655(531000)	
	80 MHz	2 536.02(507204)				2 649.99(529998)	
	90 MHz	2 541(508200)				2 644.98(528996)	
NR FDD Band n66	5 MHz	1 712.5(342500)		1 745(349000)		1 777.5(355500)	
	10 MHz	1 715(343000)		1 745(349000)		1 775(355000)	
	15 MHz	1 717.5(343500)		1 745(349000)		1 772.5(354500)	
	20 MHz	1 720(344000)		1 745(349000)		1 770(354000)	
	25 MHz	1 722.5(344500)		1 745(349000)		1 767.5(353500)	
	30 MHz			1 745(349000)			
	35 MHz	1 727.5(345500)		1 745(349000)		1 762.5(352500)	
	40 MHz	1 730(346000)		1 745(349000)		1 760(352000)	
NR TDD Band n77	10 MHz	3 705(647000)	3 759(650600)	3 813(654200)	3 867(657800)	3 921(661400)	3 975(665000)
	15 MHz	3 707.52(647168)	3 760.5(650700)	3 813.51(654234)	3 866.49(657766)	3 919.5(661300)	3 972.48(664832)
	20 MHz	3 710.01 (647334)	3 762 (650800)	3 813.99(654266)	3 866.01 (657734)	3 918 (661200)	3 969.99 (664666)
	25 MHz	3 712.5(647500)	3 763.5(650900)	3 814.5(654300)	3 865.5(657700)	3 916.5(661100)	3 967.5(664500)
	30 MHz	3 715.02 (647668)	3 765 (651000)	3 815.01(654334)	3 864.99 (657666)	3 915 (661000)	3 964.98 (664332)
	40 MHz	3 720 (648000)	3 768 (651200)	3 816 (654400)	3 864 (657600)	3 912 (660800)	3 960 (664000)
	50 MHz	3 725.01 (648334)	3 782.49 (652166)	3 840 (656000)		3 897.51 (659834)	3 954.99 (663666)
	60 MHz	3 730.02 (648668)	3 803.34(653556)			3 876.66(658444)	3 949.98 (663332)
	70 MHz	3 735 (649000)	3 804.99 (654336)			3 875.01 (658334)	3 945(663000)
	80 MHz	3 740.01 (649334)		3 840 (656000)			3 939.99 (662666)
	90 MHz	3 745.02 (649668)		3 840 (656000)		3 934.98 (662332)	
	100 MHz	3 750 (650000)				3 930 (662000)	
NR TDD Band n77 (DoD)	10 MHz	3 455.01(630334)		3 500.01(633334)		3 544.98(636332)	
	15 MHz	3 457.5(630500)		3 500.01(633334)		3 542.49(636166)	
	20 MHz	3 460.02 (630668)		3 500.01 (633334)		3 540 (636000)	
	25 MHz	3 462.99(630866)		3 500.01(633334)		3 537(635800)	
	30 MHz	3 465 (631000)		3 500.01 (633334)		3 534.99 (635666)	
	40 MHz	3 470.01 (631334)				3 529.98 (635332)	
	50 MHz	3 475.02 (631668)				3 525 (635000)	
	60 MHz			3 500.01 (633334)			
	70 MHz			3 500.01 (633334)			
	80 MHz			3 500.01 (633334)			
	90 MHz			3 500.01 (633334)			
	100 MHz			3 500.01 (633334)			

Item.	Description
NR FDD Band n5 /n66 SCS	15 kHz
NR TDD Band n41/n77 SCS	30 kHz
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: $\pi/2$ -BPSK(UL Only), QPSK, 16QAM, 64QAM, 256QAM
Non-Standalone & Standalone are supported. 5G NR FR1 Bands are supported to NSA and 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 NR Band	See the Technical description document

4.7 DUT Antenna Locations

A diagram showing the location of the device antennas for both open and closed configurations can be found in SAR_setup_photos. When the device is open, The overall dimensions of this device are > 9 X 5 cm. Since the diagonal dimension of this device is > 160 mm and < 200 mm, it is considered a “phablet”. In the closed configuration, only a simple display/interaction of notifications occurs and overall dimensions are <9 X 5 cm. Therefore, when the device is closed, the only testing considered is for body-worn and hotspot.

Antenna	Mode/Band	Rear	Front	Left	Right	Bottom	Top
MAIN1 [Ant A]	GSM/GPRS/EDGE 850	Yes	Yes	No	Yes	Yes	No
MAIN2 [Ant B]	GSM/GPRS/EDGE 1900	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	UMTS Band 5	Yes	Yes	No	Yes	Yes	No
MAIN2 [Ant B]	UMTS Band 4	Yes	Yes	Yes	No	Yes	No
MAIN2 [Ant B]	UMTS Band 2	Yes	Yes	Yes	No	Yes	No
MAIN2 [Ant B]	LTE FDD Band 2	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	LTE FDD Band 2	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	LTE FDD Band 4	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	LTE FDD Band 4	Yes	Yes	Yes	No	No	Yes
MAIN1 [Ant A]	LTE FDD Band 5	Yes	Yes	No	Yes	Yes	No
MAIN1 [Ant A]	LTE FDD Band 12	Yes	Yes	No	Yes	Yes	No
MAIN1 [Ant A]	LTE FDD Band 13	Yes	Yes	No	Yes	Yes	No
MAIN1 [Ant A]	LTE FDD Band 17	Yes	Yes	No	Yes	Yes	No
MAIN1 [Ant A]	LTE FDD Band 26 (Cell)	Yes	Yes	No	Yes	Yes	No
MAIN2 [Ant B]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	LTE FDD Band 25 (PCS)	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	LTE FDD Band 25 (PCS)	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	NR FDD Band 5	Yes	Yes	No	Yes	Yes	No
MAIN2 [Ant B]	NR FDD Band 66	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	NR FDD Band 66	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3)	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	NR TDD Band n41	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H]	NR TDD Band n41	Yes	Yes	Yes	No	No	Yes
SUB1 [Ant E]	NR TDD Band n41	Yes	Yes	No	Yes	No	Yes
SUB3 [Ant G]	NR TDD Band n77 (PC2)	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H]	2.4 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB4+6 [Ant H+J]	2.4 GHz WLAN	Yes	Yes	Yes	Yes	No	Yes
SUB3 [Ant G]	5 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB3+5 [Ant G+I]	5 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H]	Bluetooth	Yes	Yes	Yes	No	No	Yes
NFC ANT	NFC	Yes	Yes	Yes	No	No	Yes

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 D01v06, 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 D01v06.

Scenario
WWAN + 2.4 GHz Wi-Fi Ant.1
WWAN + 2.4 GHz MIMO
WWAN + 5 GHz Wi-Fi Ant.1
WWAN + 5 GHz Wi-Fi MIMO
WWAN + Bluetooth Ant.1
WWAN + Bluetooth Ant.1 + 5 GHz Wi-Fi Ant.1
WWAN + Bluetooth Ant.1 + 5 GHz Wi-Fi MIMO

Note:

1. UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
2. VoIP is supported in GPRS/EDGE
3. The highest reported SAR for each exposure condition is used for SAR summation purpose.
4. Wi-Fi Hotspot is supported for 2.4 GHz/UNII-3 of 5 GHz WLAN.
5. * Pre-installed VOIP applications are considered
6. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held to ear or Body worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI Direct beyond that listed in the above table.
7. This device supports VoLTE/VoWiFi.
8. LTE + 5G NR FR1 Scenarios are supported NSA and SA Connectivity.
9. 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 and U-NII-2C, 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 80 MHz Bandwidth only for 5 GHz
- b) Up to 20 MHz Bandwidth only for 2.4 GHz
- c) 2Tx antenna output
- d) TDWR and Band gap channels are supported for 5 GHz
- e) 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, U-NII-4 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.

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.

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.

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 ≤ 0.5 dB 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 KDB 941225 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 17 (706.5 MHz ~ 713.5MHz) is covered by LTE Band 12(699.7 MHz ~ 715.3 MHz), LTE Band 5 (824.7 MHz ~ 848.3MHz) is covered by LTE Band 26(814.7 MHz ~ 848.3 MHz), LTE Band 4 (1 712.4 MHz ~ 1 752.6MHz) is covered by LTE Band 66(1 712.5 MHz ~ 1 777.5 MHz), LTE Band 2(1 850.7 MHz ~ 1 909.3MHz) is covered by LTE Band 25(1 850.7 MHz ~ 1 914.3MHz) of this model each both LTE bands have the same target powers.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB publication 941225 D05A v01r02, SAR for LTE DL CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

This product supported Inter-band LTE Carrier Aggregation for 2A-4A, 4A-5A, 4A-12A, 5A-66A, 12A-66A with two component carriers in the uplink. SAR Measurement and conducted Powers were measured according to Nov 2019 TCBC Workshop guide.

Per FCC Guidance, C-Band for NR n77 (3705 –3975 MHz) was fully tested according to FCC procedures. For each exposure condition and antenna, the worst-case position was additionally evaluated for the NR n77 DoD (3455.01 –3544.98 MHz).

This device supports NSA(Non-standalone) and SA (Standalone) 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.

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

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 GHz. 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 (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

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

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/m^3)
- = 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 DASY5 & DASY6 & DASY8 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 or Window 10 or Window 11 is working with SAR Measurement system DASY5 & DASY6 & DASY8 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.

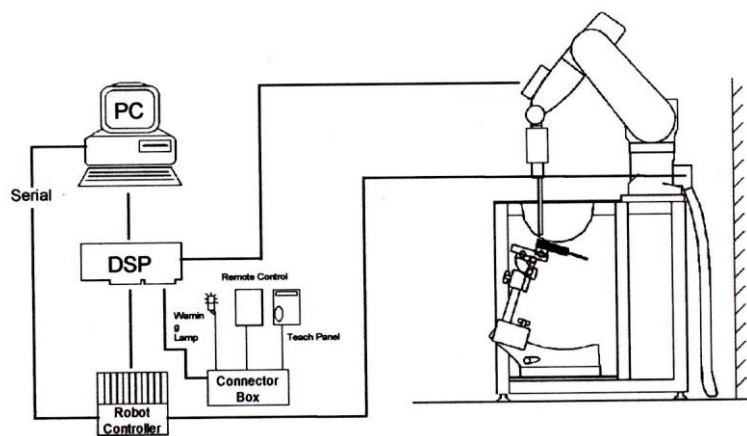


Figure 2. HCT SAR Lab. Test Measurement Set-up

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.

			$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			$5 \pm 1 \text{ mm}$	$\cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan Spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$			$\leq 2 \text{ GHz: } \leq 15 \text{ mm}$ $2\text{-}3 \text{ GHz: } \leq 12 \text{ mm}$	$3\text{-}4 \text{ GHz: } \leq 12 \text{ mm}$ $4\text{-}6 \text{ GHz: } \leq 10 \text{ mm}$
			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 $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan Spatial resolution: $\Delta x_{\text{zoom}}, \Delta y_{\text{zoom}}$			$\leq 2 \text{ GHz: } \leq 8 \text{ mm}$ $2\text{-}3 \text{ GHz: } \leq 5 \text{ mm}^*$	$3\text{-}4 \text{ GHz: } \leq 5 \text{ mm}^*$ $4\text{-}6 \text{ GHz: } \leq 4 \text{ mm}^*$
Maximum zoom scan Spatial resolution normal to phantom surface	uniform grid: $\Delta z_{\text{zoom}}(n)$		$\leq 5 \text{ mm}$	$3\text{-}4 \text{ GHz: } \leq 4 \text{ mm}$ $4\text{-}5 \text{ GHz: } \leq 3 \text{ mm}$ $5\text{-}6 \text{ GHz: } \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{zoom}}(1)$: between 1 st two Points closest to phantom surface	$\leq 4 \text{ mm}$	$3\text{-}4 \text{ GHz: } \leq 3 \text{ mm}$ $4\text{-}5 \text{ GHz: } \leq 2.5 \text{ mm}$ $5\text{-}6 \text{ GHz: } \leq 2 \text{ mm}$
		$\Delta z_{\text{zoom}}(n>1)$: between subsequent Points	$\leq 1.5 \cdot \Delta z_{\text{zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		$\geq 30 \text{ mm}$	$3\text{-}4 \text{ GHz: } \geq 28 \text{ mm}$ $4\text{-}5 \text{ GHz: } \geq 25 \text{ mm}$ $5\text{-}6 \text{ GHz: } \geq 22 \text{ mm}$
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 KDB447498 is $\leq 1.4 \text{ W/kg}$, $\leq 8 \text{ mm}$, $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

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 points 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.

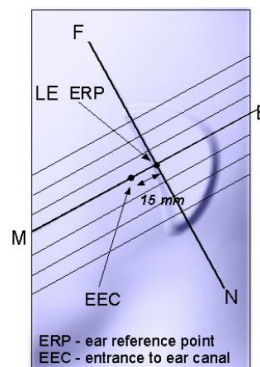


Figure 8-1
Close-up side view of
ERP

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 then 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

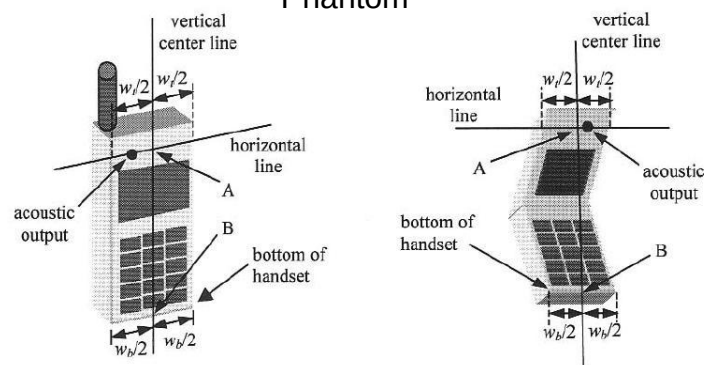


Figure 8-3. Handset vertical and horizontal reference lines

8.3 Device Holder

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

8.4 Position for Touch

Figure 8.4. shows Touch 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.

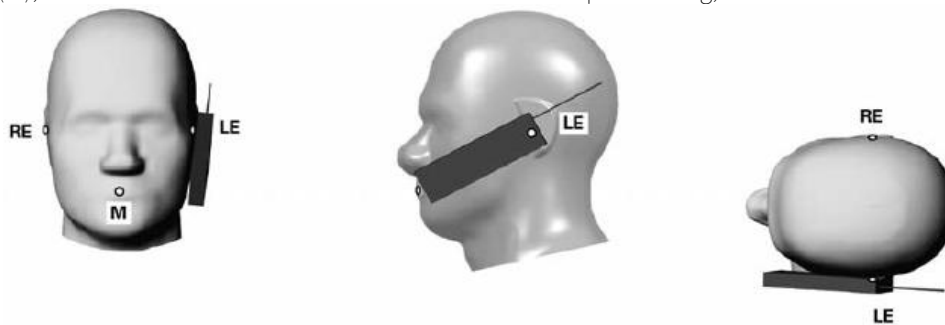


Figure 8.4 Touch/ Touch position of the wireless device

8.5 Definition of the “tilted” position

Figure 8.5. shows tilted position. Place the device in the Touch 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°.

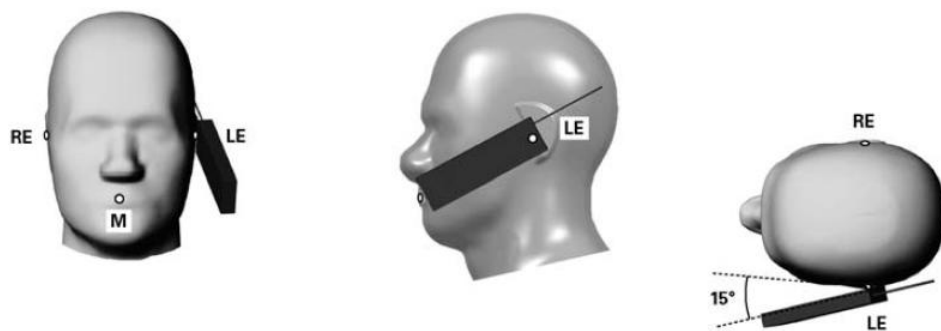


Figure 8.5. Tilt 15° position of the wireless device

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 8.6). 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 D01v06 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 $> 1.2 \text{ W/kg}$, 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.

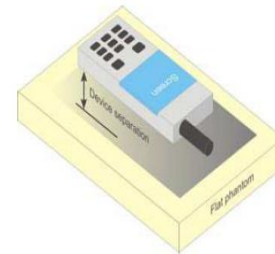


Figure 8.6
Sample Body-Worn Diagram

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 ($L \times W \geq 9\text{cm} \times 5\text{cm}$) are based on a composite test separation distance of 5 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.

In the closed configuration, only a simple display/interaction of notifications occurs and overall dimensions are $< 9 \times 5 \text{ cm}$. Therefore Per 941225 D06v02r01, when the device is closed, test separation for hotspot mode is 5 mm.

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 D01v06 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 D01v06 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 BDR tethering applications.

9. RF Exposure Limits

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg)	CONTROLLED ENVIRONMENT Occupational (W/kg)
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 made 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 D01v06, 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 check 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 (DPCCCH, DPDCH 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 DPDCH configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCH, 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 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.

10.3.5 DC-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 $< 0.8 \text{ W/kg}$.
- 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 $< 1.45 \text{ W/Kg}$.

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	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
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 $\times (T_s) \times$ 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 = $(5120 \times (1/(15000 \times 2048))) \times 2 + 0.006)/0.01 = 63.33 \%$

Where

$T_s = 1/(15000 \times 2048)$ seconds

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.

2018/01/08 11:00 Idle(Regist) Phone-2 W-CDMA Phone-1 LTE
 <Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

	Avg.	Max.	Min.	Limit
TX Power	*****	*****	*****	dBm 20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm

Modulation Analysis View (Meas. Count : 1/ 1)

Common Parameter

Test Parameter TX1 - Max. Power(QPSK/1 RB)

Call Processing On Scenario Normal

Frequency

Frame Structure TDD

Channel Bandwidth FDD Hz

UL Channel & Frequency TDD 20 CH = 2593.000000 MHz

DL Channel & Frequency 40620 CH = 2593.000000 MHz

Operation Band 41

Frequency Separation (0)MHz

Level

Input Level 30.0 dBm

Parameter

Common

Physical Channel

Call Processing

TX Measurement Setup

RX Measurement Setup

Fundamental Measurement

1 2 3 4

2018/01/08 11:01 Idle(Regist) Phone-2 W-CDMA Phone-1 LTE
 <Fundamental Measurement> Output Main Continuous

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

	Avg.	Max.	Min.	Limit
TX Power	*****	*****	*****	dBm 20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm

Modulation Analysis View (Meas. Count : 1/ 1)

MCS Index (-) 5 (QPSK) (5) (2216) - -

MCS Index (5) 5 (QPSK) (5) (1864) 4 -

MCS Index (0) 5 (QPSK) (5) (2216) - 2

MCS Index (1,6) N/A (-----) (--) (-----) - 2

CFI 3

TDD subframe 0 1 2 3 4 5 6 7 8 9

Uplink Downlink Configuration 0 : (5ms) D S U U U D S U U U

Special Subframe Configuration 6

Physical Channel Parameter

PSS Power	0.0 dB
SSS Power	0.0 dB
PBCH Power	0.0 dB
PCFICH Power	0.0 dB
PHICH Power	0.0 dB

Parameter

Common

Physical Channel

Call Processing

TX Measurement Setup

RX Measurement Setup

Fundamental Measurement

1 2 3 4

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-NII-2A 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 MHz (5.47 GHz – 5.85 GHz), 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 GHz – 5.65 GHz 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 next 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.e., 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 D01v06.

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

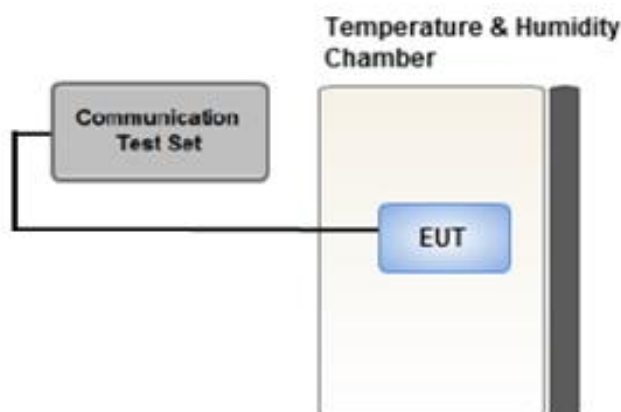
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base 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 Maximum Output Power

11.1.1 GSM 850 Maximum Conducted Output Power

GSM 850 – Antenna A

Measured P_{max}, RSI=1

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		34.00	34.00	32.50	30.50	29.50	28.00	26.00	24.00	23.00
Nominal		33.00	33.00	31.50	29.50	28.50	27.00	25.00	23.00	22.00
GSM 850	128	33.33	33.35	31.18	29.31	27.88	26.56	24.56	23.07	22.28
	190	33.24	33.38	31.19	29.45	27.91	26.72	24.76	23.08	22.32
	251	33.26	33.41	31.15	29.41	27.96	26.68	24.74	23.21	22.43

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		24.81	24.81	26.32	26.08	26.33	18.81	19.82	19.58	19.83
Nominal		23.81	23.81	25.32	25.08	25.33	17.81	18.82	18.58	18.83
GSM 850	128	24.14	24.16	25.00	24.89	24.71	17.37	18.38	18.65	19.11
	190	24.05	24.19	25.01	25.03	24.74	17.53	18.58	18.66	19.15
	251	24.07	24.22	24.97	24.99	24.79	17.49	18.56	18.79	19.26

GSM Conducted output powers (Frame-Average)

Measured RSI=0

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		31.70	31.70	28.70	26.90	25.70	28.00	26.00	24.00	23.00
Nominal		30.70	30.70	27.70	25.90	24.70	27.00	25.00	23.00	22.00
GSM 850	128	30.24	30.37	27.29	25.03	23.76				
	190	30.28	30.35	27.32	24.92	23.81				
	251	30.26	30.51	27.43	24.92	23.79				

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		22.51	22.51	22.52	22.48	22.53	18.81	19.82	19.58	19.83
Nominal		21.51	21.51	21.52	21.48	21.53	17.81	18.82	18.58	18.83
GSM 850	128	21.05	21.18	21.11	20.61	20.59				
	190	21.09	21.16	21.14	20.50	20.64				
	251	21.07	21.32	21.25	20.50	20.62				

GSM Conducted output powers (Frame-Average)

11.1.2 GSM 1900 Maximum Conducted Output Power

GSM1900 – Antenna B

Measured P_{max} , RSI = 1

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		31.50	31.50	29.50	28.00	26.00	27.00	25.00	23.00	22.00
Nominal		30.50	30.50	28.50	27.00	25.00	26.00	24.00	22.00	21.00
GSM 1900	512	29.84	29.81	28.69	26.15	23.56	25.58	23.81	21.56	20.33
	661	29.81	29.94	28.78	26.39	23.82	25.59	23.96	21.64	20.36
	810	29.93	30.04	29.15	26.38	24.11	25.93	24.22	21.89	20.55

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		22.31	22.31	23.32	23.58	22.83	17.81	18.82	18.58	18.83
Nominal		21.31	21.31	22.32	22.58	21.83	16.81	17.82	17.58	17.83
GSM 1900	512	20.65	20.62	22.51	21.73	20.39	16.39	17.63	17.14	17.16
	661	20.62	20.75	22.60	21.97	20.65	16.40	17.78	17.22	17.19
	810	20.74	20.85	22.97	21.96	20.94	16.74	18.04	17.47	17.38

GSM Conducted output powers (Frame-Average)

Measured RSI=0

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		28.20	28.20	25.20	23.40	22.20	27.00	25.00	23.00	22.00
Nominal		27.20	27.20	24.20	22.40	21.20	26.00	24.00	22.00	21.00
GSM 1900	512	26.69	26.89	23.28	21.43	20.52				
	661	26.71	26.93	23.32	21.46	20.67				
	810	26.93	27.21	23.24	21.49	20.63				

GSM Conducted output powers (Burst-Average)

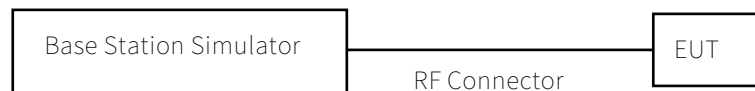
Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		19.01	19.01	19.02	18.98	19.03	17.81	18.82	18.58	18.83
Nominal		18.01	18.01	18.02	17.98	18.03	16.81	17.82	17.58	17.83
GSM 1900	512	17.50	17.70	17.10	17.01	17.35				
	661	17.52	17.74	17.14	17.04	17.50				
	810	17.74	18.02	17.06	17.07	17.46				

GSM Conducted output powers (Frame-Average)

Note:

Time slot average factor is as follows:

- 1 Tx slot = 9.19 dB, Frame-Average output power = Burst-Average output power – 9.19 dB
- 2 Tx slot = 6.18 dB, Frame-Average output power = Burst-Average output power – 6.18 dB
- 3 Tx slot = 4.42 dB, Frame-Average output power = Burst-Average output power – 4.42 dB
- 4 Tx slot = 3.17 dB, Frame-Average output power = Burst-Average output power – 3.17 dB



11.2 UMTS Maximum Output Power

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 Band 5 Maximum Conducted Output Power

UMTS Band 5 Maximum Conducted Output Power – Antenna A

Measured P_{max}

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	23.98	24.08	24.05	-
99		12.2 kbps AMR	24.13	24.12	24.05	-
5	HSDPA	Subtest 1	23.12	23.18	23.16	0
5		Subtest 2	23.24	23.29	23.25	0
5		Subtest 3	22.75	22.69	22.68	0.5
5		Subtest 4	22.26	22.28	22.23	0.5
6	HSUPA	Subtest 1	23.02	22.84	22.88	0
6		Subtest 2	20.97	20.89	20.85	2
6		Subtest 3	22.15	22.18	22.31	1
6		Subtest 4	20.86	20.88	21.09	2
6		Subtest 5	22.31	22.33	22.53	0
8	DC-HSDPA	Subtest 1	22.67	22.66	22.68	0
8		Subtest 2	22.08	22.11	22.16	0
8		Subtest 3	21.52	21.56	21.63	0.5
8		Subtest 4	21.52	21.60	21.54	0.5

UMTS Average Conducted output powers

Measured RSI=0

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	20.92	21.03	21.18	-
99		12.2 kbps AMR	20.88	21.01	21.19	-
5	HSDPA	Subtest 1	20.03	20.11	20.28	0
5		Subtest 2	20.02	20.13	20.27	0
5		Subtest 3	20.03	20.10	20.28	0
5		Subtest 4	20.04	20.13	20.26	0
6	HSUPA	Subtest 1	19.04	19.05	19.29	0
6		Subtest 2	19.02	19.06	19.24	0
6		Subtest 3	19.03	19.13	19.31	0
6		Subtest 4	19.02	19.08	19.26	0
6		Subtest 5	19.01	19.06	19.12	0
8	DC-HSDPA	Subtest 1	19.44	19.58	19.42	0
8		Subtest 2	19.46	19.55	19.35	0
8		Subtest 3	19.45	19.57	19.39	0
8		Subtest 4	19.44	19.56	19.35	0

UMTS Average Conducted output powers

Measured RSI=1

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	23.46	23.55	23.58	-
99		12.2 kbps AMR	23.42	23.45	23.56	-
5	HSDPA	Subtest 1	22.37	22.31	22.25	0
5		Subtest 2	22.01	21.98	22.04	0
5		Subtest 3	21.13	21.04	21.01	0.5
5		Subtest 4	21.07	21.02	21.06	0.5
6	HSUPA	Subtest 1	21.56	21.51	21.52	0
6		Subtest 2	20.10	20.08	20.04	2
6		Subtest 3	20.53	20.55	20.53	1
6		Subtest 4	20.02	19.98	19.99	2
6		Subtest 5	21.55	21.53	21.51	0
8	DC-HSDPA	Subtest 1	22.32	22.28	22.27	0
8		Subtest 2	21.85	21.78	21.78	0
8		Subtest 3	21.06	21.05	21.01	0.5
8		Subtest 4	21.02	21.03	21.07	0.5

UMTS Average Conducted output powers

11.2.2 UMTS Band 4 Maximum Conducted Output Power

UMTS Band 4 Maximum Conducted Output Power – Antenna A

Measured P_{max} , RSI = 1

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	24.09	24.13	24.11	-
99		12.2 kbps AMR	24.13	24.18	24.16	-
5	HSDPA	Subtest 1	23.33	23.32	23.18	0
5		Subtest 2	23.29	23.24	23.12	0
5		Subtest 3	22.75	22.81	22.64	0.5
5		Subtest 4	22.23	22.21	22.28	0.5
6	HSUPA	Subtest 1	23.19	22.33	22.64	0
6		Subtest 2	20.65	20.64	20.58	2
6		Subtest 3	21.15	21.21	21.32	1
6		Subtest 4	20.47	20.48	19.75	2
6		Subtest 5	22.16	22.15	22.18	0
8	DC-HSDPA	Subtest 1	22.34	22.66	22.54	0
8		Subtest 2	21.93	22.13	22.18	0
8		Subtest 3	21.03	21.19	21.08	0.5
8		Subtest 4	21.34	21.51	21.36	0.5

UMTS Average Conducted output powers

Measured RSI=0

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	18.64	18.61	18.58	-
99		12.2 kbps AMR	18.58	18.62	18.54	-
5	HSDPA	Subtest 1	17.72	17.82	17.62	0
5		Subtest 2	18.81	18.84	18.71	0
5		Subtest 3	18.28	18.31	18.14	0
5		Subtest 4	18.65	18.67	18.64	0
6	HSUPA	Subtest 1	17.15	17.51	17.08	0
6		Subtest 2	17.18	17.25	17.51	0
6		Subtest 3	17.57	17.23	17.18	0
6		Subtest 4	17.66	17.63	17.54	0
6		Subtest 5	17.65	17.62	17.58	0
8	DC-HSDPA	Subtest 1	16.85	16.98	17.14	0
8		Subtest 2	17.31	17.44	17.39	0
8		Subtest 3	17.23	17.42	17.49	0
8		Subtest 4	17.63	17.93	17.79	0

UMTS Average Conducted output powers

11.2.3 UMTS Band 2 Maximum Conducted Output Power

UMTS Band 2 Maximum Conducted Output Power – Antenna A

Measured P_{max} , RSI = 1

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	23.13	23.06	23.28	-
99		12.2 kbps AMR	23.23	23.15	23.31	-
5	HSDPA	Subtest 1	23.26	23.24	23.43	0
5		Subtest 2	23.15	23.09	23.22	0
5		Subtest 3	22.78	22.71	22.93	0.5
5		Subtest 4	21.73	21.64	21.79	0.5
6	HSUPA	Subtest 1	22.34	22.22	22.39	0
6		Subtest 2	20.75	20.64	20.37	2
6		Subtest 3	21.07	21.18	21.33	1
6		Subtest 4	21.26	21.15	21.38	2
6		Subtest 5	22.24	22.58	22.39	0
8	DC-HSDPA	Subtest 1	22.52	22.45	22.51	0
8		Subtest 2	22.16	22.18	22.21	0
8		Subtest 3	21.26	21.18	21.19	0.5
8		Subtest 4	21.22	21.13	21.16	0.5

UMTS Average Conducted output powers

Measured RSI = 0

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	17.02	17.03	17.14	-
99		12.2 kbps AMR	17.11	16.97	17.15	-
5	HSDPA	Subtest 1	16.74	16.56	16.84	0
5		Subtest 2	17.49	17.51	17.65	0
5		Subtest 3	17.24	17.21	17.48	0
5		Subtest 4	17.12	17.18	17.29	0
6	HSUPA	Subtest 1	16.71	16.60	16.35	0
6		Subtest 2	17.72	17.67	17.78	0
6		Subtest 3	16.81	17.08	16.89	0
6		Subtest 4	16.75	16.63	16.84	0
6		Subtest 5	16.23	16.59	16.36	0
8	DC-HSDPA	Subtest 1	15.87	15.93	16.06	0
8		Subtest 2	16.59	16.38	16.58	0
8		Subtest 3	16.61	16.34	16.57	0
8		Subtest 4	16.58	16.49	16.54	0

UMTS Average Conducted output powers

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 D05v02r05, are included, and the measurement results of other bandwidths are listed in Appendix I.

LTE B4/B5/B12/B13/B17/B26 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 Output Power

LTE Band 2 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.97	23.92	23.97	0	0
		1	49	24.15	23.99	23.97	0	0
		1	99	23.92	23.99	24.12	0	0
		50	0	22.95	22.81	22.87	0 - 1	1
		50	25	22.99	22.82	22.79	0 - 1	1
		50	49	22.91	22.86	22.94	0 - 1	1
		100	0	22.95	22.83	22.78	0 - 1	1
	16QAM	1	0	23.10	23.08	23.21	0 - 1	1
		1	49	23.32	23.17	23.10	0 - 1	1
		1	99	23.17	23.21	23.31	0 - 1	1
		50	0	21.99	21.81	21.86	0 - 2	2
		50	25	21.95	21.82	21.79	0 - 2	2
		50	49	21.97	21.85	21.91	0 - 2	2
		100	0	21.99	21.86	21.83	0 - 2	2
	64QAM	1	0	22.14	22.00	22.11	0 - 2	2
		1	49	22.21	21.95	21.92	0 - 2	2
		1	99	22.06	22.14	22.16	0 - 2	2
		50	0	21.03	20.82	20.89	0 - 3	3
		50	25	21.00	20.85	20.83	0 - 3	3
		50	49	20.94	20.88	20.90	0 - 3	3
		100	0	21.05	20.84	20.83	0 - 3	3
	256QAM	1	0	19.09	19.00	19.10	0 - 5	5
		1	49	18.91	18.84	18.84	0 - 5	5
		1	99	19.06	19.15	19.23	0 - 5	5
		50	0	18.96	18.80	18.90	0 - 5	5
		50	25	19.02	18.81	18.81	0 - 5	5
		50	49	18.97	18.90	18.94	0 - 5	5
		100	0	19.03	18.88	18.83	0 - 5	5

LTE Band 2 Conducted Power_Free(RSI0) _MAIN2[ANT.B]

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	17.25	17.25	17.31	0	0
		1	49	17.42	17.35	17.33	0	0
		1	99	17.18	17.32	17.44	0	0
		50	0	17.20	17.11	17.14	0 - 1	0
		50	25	17.27	17.10	17.12	0 - 1	0
		50	49	17.18	17.15	17.22	0 - 1	0
		100	0	17.30	17.14	17.14	0 - 1	0
	16QAM	1	0	17.56	17.41	17.51	0 - 1	0
		1	49	17.70	17.49	17.51	0 - 1	0
		1	99	17.37	17.52	17.71	0 - 1	0
		50	0	17.26	17.13	17.21	0 - 2	0
		50	25	17.26	17.16	17.15	0 - 2	0
		50	49	17.18	17.20	17.21	0 - 2	0
		100	0	17.30	17.17	17.17	0 - 2	0
	64QAM	1	0	17.30	17.32	17.33	0 - 2	0
		1	49	17.44	17.32	17.24	0 - 2	0
		1	99	17.38	17.43	17.56	0 - 2	0
		50	0	17.24	17.16	17.18	0 - 3	0
		50	25	17.29	17.15	17.16	0 - 3	0
		50	49	17.24	17.21	17.26	0 - 3	0
		100	0	17.31	17.18	17.16	0 - 3	0
	256QAM	1	0	17.45	17.32	17.41	0 - 5	0
		1	49	17.32	17.17	17.15	0 - 5	0
		1	99	17.37	17.43	17.50	0 - 5	0
		50	0	17.28	17.15	17.16	0 - 5	0
		50	25	17.29	17.21	17.18	0 - 5	0
		50	49	17.26	17.19	17.25	0 - 5	0
		100	0	17.34	17.16	17.17	0 - 5	0

LTE Band 2 Conducted Power_Pmax_SUB2[ANT.F]

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	24.06	24.24	24.28	0	0
		1	49	24.29	24.40	24.43	0	0
		1	99	24.30	24.39	24.48	0	0
		50	0	23.13	23.33	23.33	0 - 1	1
		50	25	23.23	23.38	23.37	0 - 1	1
		50	49	23.27	23.37	23.41	0 - 1	1
		100	0	23.23	23.40	23.38	0 - 1	1
	16QAM	1	0	23.29	23.54	23.47	0 - 1	1
		1	49	23.49	23.68	23.66	0 - 1	1
		1	99	23.41	23.64	23.65	0 - 1	1
		50	0	22.14	22.34	22.35	0 - 2	2
		50	25	22.24	22.37	22.38	0 - 2	2
		50	49	22.26	22.34	22.39	0 - 2	2
		100	0	22.26	22.41	22.38	0 - 2	2
	64QAM	1	0	22.23	22.32	22.36	0 - 2	2
		1	49	22.29	22.44	22.35	0 - 2	2
		1	99	22.49	22.57	22.60	0 - 2	2
		50	0	21.19	21.32	21.34	0 - 3	3
		50	25	21.22	21.36	21.34	0 - 3	3
		50	49	21.27	21.33	21.39	0 - 3	3
		100	0	21.29	21.35	21.35	0 - 3	3
	256QAM	1	0	19.27	19.41	19.41	0 - 5	5
		1	49	19.28	19.37	19.32	0 - 5	5
		1	99	19.37	19.44	19.50	0 - 5	5
		50	0	19.14	19.24	19.21	0 - 5	5
		50	25	19.17	19.29	19.23	0 - 5	5
		50	49	19.21	19.23	19.30	0 - 5	5
		100	0	19.21	19.28	19.25	0 - 5	5

LTE Band 2 Conducted Power_Free(RSI0) _SUB2[ANT.F]

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	17.31	17.49	17.36	0	0
		1	49	17.55	17.53	17.57	0	0
		1	99	17.42	17.44	17.58	0	0
		50	0	17.27	17.34	17.32	0 - 1	0
		50	25	17.33	17.37	17.38	0 - 1	0
		50	49	17.35	17.31	17.41	0 - 1	0
		100	0	17.35	17.41	17.36	0 - 1	0
	16QAM	1	0	17.57	17.56	17.58	0 - 1	0
		1	49	17.74	17.78	17.78	0 - 1	0
		1	99	17.64	17.70	17.83	0 - 1	0
		50	0	17.30	17.35	17.33	0 - 2	0
		50	25	17.36	17.41	17.39	0 - 2	0
		50	49	17.40	17.32	17.43	0 - 2	0
		100	0	17.40	17.43	17.42	0 - 2	0
	64QAM	1	0	17.46	17.61	17.48	0 - 2	0
		1	49	17.61	17.59	17.58	0 - 2	0
		1	99	17.65	17.57	17.70	0 - 2	0
		50	0	17.30	17.38	17.34	0 - 3	0
		50	25	17.38	17.39	17.41	0 - 3	0
		50	49	17.39	17.32	17.44	0 - 3	0
		100	0	17.38	17.41	17.41	0 - 3	0
	256QAM	1	0	17.53	17.55	17.51	0 - 5	0
		1	49	17.37	17.35	17.36	0 - 5	0
		1	99	17.60	17.53	17.73	0 - 5	0
		50	0	17.35	17.40	17.35	0 - 5	0
		50	25	17.40	17.39	17.46	0 - 5	0
		50	49	17.44	17.41	17.49	0 - 5	0
		100	0	17.43	17.46	17.44	0 - 5	0

LTE Band 2 Conducted Power_RCV(RSI1) _SUB2[ANT.F]

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	16.79	16.84	16.73	0	0
		1	49	16.90	16.91	16.92	0	0
		1	99	16.84	16.83	16.93	0	0
		50	0	16.73	16.77	16.65	0 - 1	0
		50	25	16.74	16.76	16.74	0 - 1	0
		50	49	16.77	16.70	16.79	0 - 1	0
		100	0	16.81	16.78	16.71	0 - 1	0
	16QAM	1	0	16.98	17.05	16.91	0 - 1	0
		1	49	17.10	17.06	17.10	0 - 1	0
		1	99	17.19	16.94	17.18	0 - 1	0
		50	0	16.73	16.75	16.66	0 - 2	0
		50	25	16.78	16.74	16.73	0 - 2	0
		50	49	16.83	16.74	16.79	0 - 2	0
		100	0	16.82	16.81	16.80	0 - 2	0
	64QAM	1	0	16.83	17.01	16.89	0 - 2	0
		1	49	17.09	17.12	17.02	0 - 2	0
		1	99	17.07	16.89	17.08	0 - 2	0
		50	0	16.74	16.78	16.68	0 - 3	0
		50	25	16.80	16.77	16.73	0 - 3	0
		50	49	16.85	16.71	16.83	0 - 3	0
		100	0	16.81	16.82	16.73	0 - 3	0
	256QAM	1	0	16.94	17.07	16.91	0 - 5	0
		1	49	16.61	16.67	16.69	0 - 5	0
		1	99	17.04	16.90	17.03	0 - 5	0
		50	0	16.77	16.81	16.72	0 - 5	0
		50	25	16.84	16.79	16.77	0 - 5	0
		50	49	16.89	16.79	16.86	0 - 5	0
		100	0	16.84	16.81	16.80	0 - 5	0

LTE Band 4 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 Ch. 1732.5 MHz			
20 MHz	QPSK	1	0		23.46		0	0
		1	49		23.92		0	0
		1	99		23.71		0	0
		50	0		22.62		0 - 1	1
		50	25		22.74		0 - 1	1
		50	49		22.74		0 - 1	1
		100	0		22.73		0 - 1	1
	16QAM	1	0		22.63		0 - 1	1
		1	49		23.07		0 - 1	1
		1	99		22.91		0 - 1	1
		50	0		21.61		0 - 2	2
		50	25		21.73		0 - 2	2
		50	49		21.76		0 - 2	2
		100	0		21.77		0 - 2	2
	64QAM	1	0		21.64		0 - 2	2
		1	49		21.83		0 - 2	2
		1	99		21.86		0 - 2	2
		50	0		20.61		0 - 3	3
		50	25		20.71		0 - 3	3
		50	49		20.76		0 - 3	3
		100	0		20.75		0 - 3	3
	256QAM	1	0		18.57		0 - 5	5
		1	49		18.74		0 - 5	5
		1	99		18.78		0 - 5	5
		50	0		18.61		0 - 5	5
		50	25		18.75		0 - 5	5
		50	49		18.78		0 - 5	5
		100	0		18.71		0 - 5	5

LTE Band 4 Conducted Power_Free(RSI0) _MAIN2[ANT.B]

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 Ch. 1732.5 MHz			
20 MHz	QPSK	1	0		17.10		0	0
		1	49		17.50		0	0
		1	99		17.32		0	0
		50	0		17.15		0 - 1	0
		50	25		17.32		0 - 1	0
		50	49		17.37		0 - 1	0
		100	0		17.35		0 - 1	0
	16QAM	1	0		17.34		0 - 1	0
		1	49		17.77		0 - 1	0
		1	99		17.54		0 - 1	0
		50	0		17.19		0 - 2	0
		50	25		17.33		0 - 2	0
		50	49		17.36		0 - 2	0
		100	0		17.37		0 - 2	0
	64QAM	1	0		17.16		0 - 2	0
		1	49		17.61		0 - 2	0
		1	99		17.54		0 - 2	0
		50	0		17.24		0 - 3	0
		50	25		17.31		0 - 3	0
		50	49		17.43		0 - 3	0
		100	0		17.35		0 - 3	0
	256QAM	1	0		17.24		0 - 5	0
		1	49		17.37		0 - 5	0
		1	99		17.44		0 - 5	0
		50	0		17.25		0 - 5	0
		50	25		17.42		0 - 5	0
		50	49		17.45		0 - 5	0
		100	0		17.37		0 - 5	0

LTE Band 4 Conducted Power_Pmax_SUB2[ANT.F]

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 Ch. 1732.5 MHz			
20 MHz	QPSK	1	0		23.68		0	0
		1	49		24.00		0	0
		1	99		24.19		0	0
		50	0		22.78		0 - 1	1
		50	25		22.89		0 - 1	1
		50	49		23.04		0 - 1	1
	16QAM	100	0		22.86		0 - 1	1
		1	0		22.86		0 - 1	1
		1	49		23.14		0 - 1	1
		1	99		23.47		0 - 1	1
		50	0		21.79		0 - 2	2
		50	25		21.91		0 - 2	2
	64QAM	50	49		22.05		0 - 2	2
		100	0		21.90		0 - 2	2
		1	0		21.81		0 - 2	2
		1	49		21.95		0 - 2	2
		1	99		22.34		0 - 2	2
		50	0		20.77		0 - 3	3
	256QAM	50	25		20.89		0 - 3	3
		50	49		21.07		0 - 3	3
		100	0		20.95		0 - 3	3
		1	0		18.84		0 - 5	5
		1	49		18.83		0 - 5	5
		1	99		19.34		0 - 5	5
		50	0		18.74		0 - 5	5
		50	25		18.85		0 - 5	5
		50	49		19.01		0 - 5	5
		100	0		18.85		0 - 5	5

LTE Band 4 Conducted Power_Free(RSI0), RCV(RSI1) _SUB2[ANT.F]

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 Ch. 1732.5 MHz			
20 MHz	QPSK	1	0		16.28		0	0
		1	49		16.61		0	0
		1	99		16.81		0	0
		50	0		16.29		0 - 1	0
		50	25		16.42		0 - 1	0
		50	49		16.58		0 - 1	0
		100	0		16.43		0 - 1	0
	16QAM	1	0		16.60		0 - 1	0
		1	49		16.71		0 - 1	0
		1	99		17.01		0 - 1	0
		50	0		16.31		0 - 2	0
		50	25		16.44		0 - 2	0
		50	49		16.63		0 - 2	0
		100	0		16.47		0 - 2	0
	64QAM	1	0		16.43		0 - 2	0
		1	49		16.76		0 - 2	0
		1	99		16.96		0 - 2	0
		50	0		16.37		0 - 3	0
		50	25		16.44		0 - 3	0
		50	49		16.63		0 - 3	0
		100	0		16.46		0 - 3	0
	256QAM	1	0		16.40		0 - 5	0
		1	49		16.34		0 - 5	0
		1	99		16.93		0 - 5	0
		50	0		16.36		0 - 5	0
		50	25		16.50		0 - 5	0
		50	49		16.62		0 - 5	0
		100	0		16.47		0 - 5	0

LTE Band 5 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

LTE Band 5_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525 Ch. 836.5 MHz			
10 MHz	QPSK	1	0		24.62		0	0
		1	24		24.80		0	0
		1	49		24.73		0	0
		25	0		23.70		0 - 1	1
		25	12		23.72		0 - 1	1
		25	24		23.74		0 - 1	1
		50	0		23.72		0 - 1	1
	16QAM	1	0		23.88		0 - 1	1
		1	24		23.96		0 - 1	1
		1	49		23.93		0 - 1	1
		25	0		22.66		0 - 2	2
		25	12		22.64		0 - 2	2
		25	24		22.74		0 - 2	2
		50	0		22.67		0 - 2	2
	64QAM	1	0		22.83		0 - 2	2
		1	24		22.89		0 - 2	2
		1	49		22.83		0 - 2	2
		25	0		21.69		0 - 3	3
		25	12		21.69		0 - 3	3
		25	24		21.70		0 - 3	3
		50	0		21.69		0 - 3	3
	256QAM	1	0		19.86		0 - 5	5
		1	24		19.63		0 - 5	5
		1	49		19.85		0 - 5	5
		25	0		19.64		0 - 5	5
		25	12		19.70		0 - 5	5
		25	24		19.71		0 - 5	5
		50	0		19.70		0 - 5	5

LTE Band 5 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

LTE Band 5_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525 Ch. 836.5 MHz			
10 MHz	QPSK	1	0		21.11		0	0
		1	24		21.27		0	0
		1	49		21.21		0	0
		25	0		21.07		0 - 1	0
		25	12		21.13		0 - 1	0
		25	24		21.15		0 - 1	0
		50	0		21.16		0 - 1	0
	16QAM	1	0		21.48		0 - 1	0
		1	24		21.45		0 - 1	0
		1	49		21.46		0 - 1	0
		25	0		21.14		0 - 2	0
		25	12		21.18		0 - 2	0
		25	24		21.17		0 - 2	0
		50	0		21.19		0 - 2	0
	64QAM	1	0		21.30		0 - 2	0
		1	24		21.47		0 - 2	0
		1	49		21.40		0 - 2	0
		25	0		21.13		0 - 3	0
		25	12		21.19		0 - 3	0
		25	24		21.18		0 - 3	0
		50	0		21.18		0 - 3	0
	256QAM	1	0		19.61		0 - 5	2
		1	24		19.46		0 - 5	2
		1	49		19.65		0 - 5	2
		25	0		19.48		0 - 5	2
		25	12		19.49		0 - 5	2
		25	24		19.50		0 - 5	2
		50	0		19.51		0 - 5	2

LTE Band 12 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

LTE Band 12_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0		25.27		0
		1	24		25.26		0
		1	49		25.09		0
		25	0		24.25		0 - 1
		25	12		24.20		0 - 1
		25	24		24.13		0 - 1
		50	0		24.23		0 - 1
	16QAM	1	0		24.38		0 - 1
		1	24		24.42		0 - 1
		1	49		24.29		0 - 1
		25	0		23.20		0 - 2
		25	12		23.15		0 - 2
		25	24		23.16		0 - 2
		50	0		23.12		0 - 2
	64QAM	1	0		23.34		0 - 2
		1	24		23.38		0 - 2
		1	49		23.20		0 - 2
		25	0		22.19		0 - 3
		25	12		22.16		0 - 3
		25	24		22.17		0 - 3
		50	0		22.16		0 - 3
	256QAM	1	0		20.45		0 - 5
		1	24		20.13		0 - 5
		1	49		20.36		0 - 5
		25	0		20.30		0 - 5
		25	12		20.23		0 - 5
		25	24		20.23		0 - 5
		50	0		20.24		0 - 5

LTE Band 12 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

LTE Band 12_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					23095 Ch. 707.5 MHz			
10 MHz	QPSK	1	0		22.36		0	0
		1	24		22.32		0	0
		1	49		22.12		0	0
		25	0		22.20		0 - 1	0
		25	12		22.17		0 - 1	0
		25	24		22.12		0 - 1	0
		50	0		22.21		0 - 1	0
	16QAM	1	0		22.42		0 - 1	0
		1	24		22.55		0 - 1	0
		1	49		22.24		0 - 1	0
		25	0		22.20		0 - 2	0
		25	12		22.15		0 - 2	0
		25	24		22.13		0 - 2	0
		50	0		22.15		0 - 2	0
	64QAM	1	0		22.30		0 - 2	0
		1	24		22.40		0 - 2	0
		1	49		22.28		0 - 2	0
		25	0		21.97		0 - 3	0.5
		25	12		21.99		0 - 3	0.5
		25	24		21.97		0 - 3	0.5
		50	0		22.00		0 - 3	0.5
	256QAM	1	0		20.31		0 - 5	2.5
		1	24		19.86		0 - 5	2.5
		1	49		20.01		0 - 5	2.5
		25	0		20.04		0 - 5	2.5
		25	12		20.02		0 - 5	2.5
		25	24		19.95		0 - 5	2.5
		50	0		20.05		0 - 5	2.5

LTE Band 13 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

LTE Band 13_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23230 Ch. 782 MHz		
10 MHz	QPSK	1	0		23.82		0
		1	24		23.97		0
		1	49		23.89		0
		25	0		22.81		0 - 1
		25	12		22.79		0 - 1
		25	24		22.84		0 - 1
		50	0		22.86		0 - 1
	16QAM	1	0		22.98		0 - 1
		1	24		23.12		0 - 1
		1	49		23.15		0 - 1
		25	0		21.81		0 - 2
		25	12		21.79		0 - 2
		25	24		21.84		0 - 2
		50	0		21.83		0 - 2
	64QAM	1	0		21.95		0 - 2
		1	24		22.08		0 - 2
		1	49		21.98		0 - 2
		25	0		20.81		0 - 3
		25	12		20.81		0 - 3
		25	24		20.83		0 - 3
		50	0		20.87		0 - 3
	256QAM	1	0		19.10		0 - 5
		1	24		18.90		0 - 5
		1	49		19.14		0 - 5
		25	0		18.84		0 - 5
		25	12		18.90		0 - 5
		25	24		18.93		0 - 5
		50	0		18.90		0 - 5

LTE Band 13 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

LTE Band 13_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					23230 Ch. 782 MHz			
10 MHz	QPSK	1	0		23.13		0	0
		1	24		23.23		0	0
		1	49		23.14		0	0
		25	0		22.76		0 - 1	0.5
		25	12		22.80		0 - 1	0.5
		25	24		22.77		0 - 1	0.5
		50	0		22.80		0 - 1	0.5
	16QAM	1	0		22.99		0 - 1	0.5
		1	24		23.07		0 - 1	0.5
		1	49		23.06		0 - 1	0.5
		25	0		21.80		0 - 2	1.5
		25	12		21.75		0 - 2	1.5
		25	24		21.78		0 - 2	1.5
		50	0		21.79		0 - 2	1.5
	64QAM	1	0		21.98		0 - 2	1.5
		1	24		22.14		0 - 2	1.5
		1	49		21.97		0 - 2	1.5
		25	0		20.78		0 - 3	2.5
		25	12		20.79		0 - 3	2.5
		25	24		20.80		0 - 3	2.5
		50	0		20.81		0 - 3	2.5
	256QAM	1	0		19.06		0 - 5	4.5
		1	24		18.78		0 - 5	4.5
		1	49		19.09		0 - 5	4.5
		25	0		18.86		0 - 5	4.5
		25	12		18.83		0 - 5	4.5
		25	24		18.85		0 - 5	4.5
		50	0		18.86		0 - 5	4.5

LTE Band 17 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

LTE Band 17_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23790 Ch. 710 MHz		
10 MHz	QPSK	1	0		25.04		0
		1	24		25.02		0
		1	49		24.81		0
		25	0		24.00		0 - 1
		25	12		23.94		0 - 1
		25	24		23.88		0 - 1
		50	0		23.94		0 - 1
	16QAM	1	0		24.12		0 - 1
		1	24		24.11		0 - 1
		1	49		24.00		0 - 1
		25	0		22.98		0 - 2
		25	12		22.91		0 - 2
		25	24		22.86		0 - 2
		50	0		22.93		0 - 2
	64QAM	1	0		23.06		0 - 2
		1	24		23.13		0 - 2
		1	49		22.92		0 - 2
		25	0		21.98		0 - 3
		25	12		21.98		0 - 3
		25	24		21.94		0 - 3
		50	0		21.96		0 - 3
	256QAM	1	0		20.25		0 - 5
		1	24		19.90		0 - 5
		1	49		20.09		0 - 5
		25	0		20.06		0 - 5
		25	12		20.04		0 - 5
		25	24		19.93		0 - 5
		50	0		20.05		0 - 5

LTE Band 17 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

LTE Band 17_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23790 Ch. 710 MHz		
10 MHz	QPSK	1	0		22.28		0
		1	24		22.37		0
		1	49		22.09		0
		25	0		22.21		0 - 1
		25	12		22.16		0 - 1
		25	24		22.04		0 - 1
		50	0		22.21		0 - 1
	16QAM	1	0		22.34		0 - 1
		1	24		22.50		0 - 1
		1	49		22.35		0 - 1
		25	0		22.20		0 - 2
		25	12		22.12		0 - 2
		25	24		22.07		0 - 2
		50	0		22.19		0 - 2
	64QAM	1	0		22.35		0 - 2
		1	24		22.42		0 - 2
		1	49		22.16		0 - 2
		25	0		22.02		0 - 3
		25	12		21.99		0 - 3
		25	24		21.86		0 - 3
		50	0		21.98		0 - 3
	256QAM	1	0		20.19		0 - 5
		1	24		19.91		0 - 5
		1	49		20.03		0 - 5
		25	0		20.04		0 - 5
		25	12		20.01		0 - 5
		25	24		19.94		0 - 5
		50	0		20.05		0 - 5

LTE Band 25 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	24.36	24.02	24.08	0	0
		1	49	24.33	24.18	24.23	0	0
		1	99	24.19	24.18	24.29	0	0
		50	0	23.28	23.06	23.05	0 - 1	1
		50	25	23.25	23.01	23.15	0 - 1	1
		50	49	23.19	23.08	23.26	0 - 1	1
		100	0	23.25	23.03	23.12	0 - 1	1
	16QAM	1	0	23.41	23.30	23.28	0 - 1	1
		1	49	23.59	23.41	23.46	0 - 1	1
		1	99	23.38	23.45	23.46	0 - 1	1
		50	0	22.23	22.03	22.03	0 - 2	2
		50	25	22.23	22.03	22.15	0 - 2	2
		50	49	22.18	22.04	22.26	0 - 2	2
		100	0	22.28	22.05	22.13	0 - 2	2
	64QAM	1	0	22.30	22.16	22.19	0 - 2	2
		1	49	22.31	22.10	22.15	0 - 2	2
		1	99	22.34	22.33	22.38	0 - 2	2
		50	0	21.23	21.05	21.06	0 - 3	3
		50	25	21.21	21.04	21.11	0 - 3	3
		50	49	21.20	21.09	21.23	0 - 3	3
		100	0	21.24	21.04	21.15	0 - 3	3
	256QAM	1	0	19.35	19.12	19.25	0 - 5	5
		1	49	19.30	19.02	19.17	0 - 5	5
		1	99	19.20	19.29	19.36	0 - 5	5
		50	0	19.17	18.97	19.00	0 - 5	5
		50	25	19.21	19.01	19.10	0 - 5	5
		50	49	19.12	19.07	19.20	0 - 5	5
		100	0	19.18	19.00	19.11	0 - 5	5

LTE Band 25 Conducted Power_Free(RSI0) _MAIN2[ANT.B]

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	17.32	17.23	17.26	0	0
		1	49	17.46	17.42	17.49	0	0
		1	99	17.26	17.41	17.45	0	0
		50	0	17.27	17.18	17.17	0 - 1	0
		50	25	17.27	17.19	17.30	0 - 1	0
		50	49	17.26	17.20	17.40	0 - 1	0
		100	0	17.30	17.20	17.32	0 - 1	0
	16QAM	1	0	17.51	17.46	17.44	0 - 1	0
		1	49	17.65	17.56	17.69	0 - 1	0
		1	99	17.42	17.52	17.65	0 - 1	0
		50	0	17.28	17.17	17.18	0 - 2	0
		50	25	17.30	17.20	17.32	0 - 2	0
		50	49	17.28	17.23	17.43	0 - 2	0
		100	0	17.38	17.21	17.33	0 - 2	0
	64QAM	1	0	17.37	17.34	17.29	0 - 2	0
		1	49	17.59	17.35	17.39	0 - 2	0
		1	99	17.40	17.52	17.55	0 - 2	0
		50	0	17.33	17.20	17.21	0 - 3	0
		50	25	17.33	17.19	17.31	0 - 3	0
		50	49	17.30	17.25	17.44	0 - 3	0
		100	0	17.38	17.21	17.33	0 - 3	0
	256QAM	1	0	17.37	17.36	17.45	0 - 5	0
		1	49	17.34	17.22	17.36	0 - 5	0
		1	99	17.43	17.49	17.58	0 - 5	0
		50	0	17.31	17.19	17.20	0 - 5	0
		50	25	17.33	17.19	17.34	0 - 5	0
		50	49	17.30	17.28	17.43	0 - 5	0
		100	0	17.37	17.24	17.30	0 - 5	0

LTE Band 25 Conducted Power_Pmax_SUB2[ANT.F]

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	23.87	24.02	24.04	0	0
		1	49	24.11	24.21	24.22	0	0
		1	99	24.11	24.14	24.17	0	0
		50	0	22.91	23.08	23.13	0 - 1	1
		50	25	23.01	23.07	23.14	0 - 1	1
		50	49	23.03	23.12	23.23	0 - 1	1
		100	0	23.02	23.12	23.16	0 - 1	1
	16QAM	1	0	23.03	23.14	23.28	0 - 1	1
		1	49	23.29	23.36	23.43	0 - 1	1
		1	99	23.33	23.32	23.39	0 - 1	1
		50	0	21.94	22.06	22.12	0 - 2	2
		50	25	21.96	22.06	22.15	0 - 2	2
		50	49	22.03	22.07	22.24	0 - 2	2
		100	0	22.01	22.11	22.14	0 - 2	2
	64QAM	1	0	21.94	22.12	22.21	0 - 2	2
		1	49	22.09	22.10	22.20	0 - 2	2
		1	99	22.24	22.21	22.32	0 - 2	2
		50	0	20.97	21.05	21.15	0 - 3	3
		50	25	21.03	21.06	21.18	0 - 3	3
		50	49	21.08	21.11	21.23	0 - 3	3
		100	0	21.05	21.12	21.16	0 - 3	3
	256QAM	1	0	19.08	19.18	19.13	0 - 5	5
		1	49	19.07	19.04	19.29	0 - 5	5
		1	99	19.23	19.17	19.28	0 - 5	5
		50	0	18.99	19.05	19.10	0 - 5	5
		50	25	19.03	19.04	19.13	0 - 5	5
		50	49	19.05	19.06	19.23	0 - 5	5
		100	0	19.07	19.07	19.13	0 - 5	5

LTE Band 25 Conducted Power_Free(RSI0) _SUB2[ANT.F]

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	17.36	17.40	17.43	0	0
		1	49	17.58	17.54	17.66	0	0
		1	99	17.54	17.46	17.57	0	0
		50	0	17.38	17.41	17.43	0 - 1	0
		50	25	17.40	17.35	17.43	0 - 1	0
		50	49	17.42	17.37	17.56	0 - 1	0
		100	0	17.45	17.38	17.45	0 - 1	0
	16QAM	1	0	17.56	17.65	17.54	0 - 1	0
		1	49	17.72	17.77	17.88	0 - 1	0
		1	99	17.79	17.63	17.72	0 - 1	0
		50	0	17.31	17.43	17.45	0 - 2	0
		50	25	17.41	17.41	17.43	0 - 2	0
		50	49	17.43	17.38	17.51	0 - 2	0
		100	0	17.45	17.46	17.50	0 - 2	0
	64QAM	1	0	17.49	17.52	17.55	0 - 2	0
		1	49	17.63	17.55	17.69	0 - 2	0
		1	99	17.64	17.58	17.70	0 - 2	0
		50	0	17.35	17.44	17.45	0 - 3	0
		50	25	17.45	17.37	17.47	0 - 3	0
		50	49	17.45	17.34	17.52	0 - 3	0
		100	0	17.48	17.43	17.47	0 - 3	0
	256QAM	1	0	17.55	17.57	17.64	0 - 5	0
		1	49	17.33	17.35	17.43	0 - 5	0
		1	99	17.66	17.62	17.71	0 - 5	0
		50	0	17.40	17.46	17.46	0 - 5	0
		50	25	17.45	17.44	17.53	0 - 5	0
		50	49	17.50	17.40	17.58	0 - 5	0
		100	0	17.45	17.43	17.52	0 - 5	0

LTE Band 25 Conducted Power_RCV(RSI1) _SUB2[ANT.F]

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	16.79	16.86	16.76	0	0
		1	49	17.03	17.02	17.21	0	0
		1	99	16.83	16.78	16.90	0	0
		50	0	16.75	16.72	16.73	0 - 1	0
		50	25	16.78	16.71	16.81	0 - 1	0
		50	49	17.09	17.06	17.09	0 - 1	0
		100	0	16.87	16.73	16.85	0 - 1	0
	16QAM	1	0	16.98	17.06	16.95	0 - 1	0
		1	49	17.10	17.09	17.22	0 - 1	0
		1	99	17.09	16.99	17.15	0 - 1	0
		50	0	16.78	16.77	16.75	0 - 2	0
		50	25	16.79	16.69	16.84	0 - 2	0
		50	49	16.85	16.71	16.88	0 - 2	0
		100	0	16.85	16.76	16.86	0 - 2	0
	64QAM	1	0	16.97	17.02	16.88	0 - 2	0
		1	49	17.11	16.99	17.11	0 - 2	0
		1	99	17.06	16.88	16.94	0 - 2	0
		50	0	16.79	16.79	16.77	0 - 3	0
		50	25	16.81	16.73	16.87	0 - 3	0
		50	49	16.90	16.73	16.88	0 - 3	0
		100	0	16.83	16.77	16.84	0 - 3	0
	256QAM	1	0	16.94	17.06	16.95	0 - 5	0
		1	49	16.68	16.51	16.77	0 - 5	0
		1	99	17.08	16.89	17.04	0 - 5	0
		50	0	16.77	16.78	16.81	0 - 5	0
		50	25	16.88	16.77	16.85	0 - 5	0
		50	49	16.89	16.75	16.94	0 - 5	0
		100	0	16.86	16.80	16.88	0 - 5	0

LTE Band 26 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

LTE Band 26_15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 MHz			
15 MHz	QPSK	1	0		24.98		0	0
		1	36		24.74		0	0
		1	74		24.96		0	0
		36	0		23.99		0 - 1	1
		36	18		23.90		0 - 1	1
		36	39		23.97		0 - 1	1
		75	0		23.93		0 - 1	1
	16QAM	1	0		24.05		0 - 1	1
		1	36		24.28		0 - 1	1
		1	74		24.19		0 - 1	1
		36	0		22.92		0 - 2	2
		36	18		22.90		0 - 2	2
		36	39		22.96		0 - 2	2
		75	0		22.95		0 - 2	2
	64QAM	1	0		23.06		0 - 2	2
		1	36		22.92		0 - 2	2
		1	74		23.08		0 - 2	2
		36	0		21.97		0 - 3	3
		36	18		21.93		0 - 3	3
		36	39		21.94		0 - 3	3
		75	0		21.93		0 - 3	3
	256QAM	1	0		19.98		0 - 5	5
		1	36		20.04		0 - 5	5
		1	74		20.12		0 - 5	5
		36	0		19.94		0 - 5	5
		36	18		19.94		0 - 5	5
		36	39		19.96		0 - 5	5
		75	0		19.93		0 - 5	5

LTE Band 26 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

LTE Band 26_15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 MHz			
15 MHz	QPSK	1	0		21.25		0	0
		1	36		21.00		0	0
		1	74		21.22		0	0
		36	0		21.19		0 - 1	0
		36	18		21.13		0 - 1	0
		36	39		21.17		0 - 1	0
		75	0		21.16		0 - 1	0
	16QAM	1	0		21.51		0 - 1	0
		1	36		21.56		0 - 1	0
		1	74		21.49		0 - 1	0
		36	0		21.19		0 - 2	0
		36	18		21.16		0 - 2	0
		36	39		21.18		0 - 2	0
		75	0		21.19		0 - 2	0
	64QAM	1	0		21.40		0 - 2	0
		1	36		21.17		0 - 2	0
		1	74		21.39		0 - 2	0
		36	0		21.19		0 - 3	0
		36	18		21.15		0 - 3	0
		36	39		21.18		0 - 3	0
		75	0		21.18		0 - 3	0
	256QAM	1	0		19.67		0 - 5	2
		1	36		19.63		0 - 5	2
		1	74		19.68		0 - 5	2
		36	0		19.54		0 - 5	2
		36	18		19.53		0 - 5	2
		36	39		19.51		0 - 5	2
		75	0		19.51		0 - 5	2

LTE Band 41 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]

LTE Band 41_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680 MHz		
20 MHz	QPSK	1	0	24.02	24.12	23.99	23.96	23.81	0	0
		1	49	23.94	24.02	24.11	23.88	23.84	0	0
		1	99	23.84	24.04	23.78	23.78	23.80	0	0
		50	0	23.09	23.18	22.99	22.99	22.86	0 - 1	1
		50	25	23.03	23.15	22.99	22.93	22.91	0 - 1	1
		50	49	22.97	23.16	22.94	22.90	22.93	0 - 1	1
		100	0	23.02	23.16	22.98	22.94	22.92	0 - 1	1
	16QAM	1	0	23.12	23.11	22.99	23.05	22.83	0 - 1	1
		1	49	23.08	23.19	23.05	22.99	22.96	0 - 1	1
		1	99	22.94	23.18	22.86	22.90	22.91	0 - 1	1
		50	0	22.15	22.22	22.02	22.05	21.90	0 - 2	2
		50	25	22.08	22.22	22.02	21.99	21.94	0 - 2	2
		50	49	22.01	22.22	21.97	21.96	21.96	0 - 2	2
		100	0	22.08	22.23	22.03	22.00	21.96	0 - 2	2
	64QAM	1	0	21.87	21.88	21.72	21.79	21.56	0 - 2	2
		1	49	21.63	21.77	21.58	21.56	21.52	0 - 2	2
		1	99	21.63	21.89	21.54	21.58	21.60	0 - 2	2
		50	0	21.20	21.29	21.07	21.12	20.97	0 - 3	3
		50	25	21.14	21.28	21.07	21.05	21.01	0 - 3	3
		50	49	21.06	21.28	21.02	21.01	21.02	0 - 3	3
		100	0	21.06	21.22	21.01	20.99	20.94	0 - 3	3
	256QAM	1	0	19.04	19.08	18.87	18.94	18.71	0 - 5	5
		1	49	18.82	18.98	18.74	18.75	18.68	0 - 5	5
		1	99	18.79	19.07	18.66	18.72	18.75	0 - 5	5
		50	0	19.14	19.23	19.01	19.07	18.90	0 - 5	5
		50	25	19.07	19.24	19.01	19.01	18.95	0 - 5	5
		50	49	19.01	19.23	18.96	18.98	18.97	0 - 5	5
		100	0	19.00	19.17	18.94	18.95	18.90	0 - 5	5

LTE Band 41 Conducted Power_Free(RSI0) _MAIN2[ANT.B]

LTE Band 41_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680 MHz		
20 MHz	QPSK	1	0	19.30	19.43	19.23	19.17	19.16	0	0
		1	49	19.20	19.40	19.19	19.06	19.10	0	0
		1	99	19.07	19.33	19.01	19.00	19.04	0	0
		50	0	19.29	19.43	19.17	19.14	19.13	0 - 1	0
		50	25	19.21	19.40	19.16	19.06	19.09	0 - 1	0
		50	49	19.14	19.39	19.12	19.07	19.08	0 - 1	0
		100	0	19.22	19.40	19.18	19.07	19.09	0 - 1	0
	16QAM	1	0	19.34	19.38	19.16	19.21	19.03	0 - 1	0
		1	49	19.21	19.39	19.15	19.07	19.09	0 - 1	0
		1	99	19.13	19.39	19.06	19.06	19.11	0 - 1	0
		50	0	19.32	19.41	19.18	19.17	19.06	0 - 2	0
		50	25	19.25	19.44	19.18	19.10	19.14	0 - 2	0
		50	49	19.18	19.43	19.15	19.11	19.13	0 - 2	0
		100	0	19.26	19.45	19.22	19.12	19.15	0 - 2	0
	64QAM	1	0	19.08	19.11	18.88	18.93	18.76	0 - 2	0
		1	49	18.84	19.02	18.79	18.71	18.72	0 - 2	0
		1	99	18.81	19.09	18.74	18.75	18.80	0 - 2	0
		50	0	19.38	19.48	19.24	19.25	19.14	0 - 3	0
		50	25	19.31	19.50	19.25	19.18	19.21	0 - 3	0
		50	49	19.24	19.49	19.20	19.16	19.20	0 - 3	0
		100	0	19.25	19.44	19.19	19.12	19.14	0 - 3	0
	256QAM	1	0	18.85	18.88	18.64	18.71	18.53	0 - 5	0.5
		1	49	18.68	18.87	18.63	18.54	18.57	0 - 5	0.5
		1	99	18.57	18.85	18.49	18.52	18.55	0 - 5	0.5
		50	0	18.97	19.07	18.83	18.83	18.71	0 - 5	0.5
		50	25	18.90	19.08	18.83	18.77	18.79	0 - 5	0.5
		50	49	18.84	19.08	18.80	18.76	18.79	0 - 5	0.5
		100	0	18.83	19.02	18.79	18.70	18.74	0 - 5	0.5

LTE Band 66 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.60	23.69	23.76	0	0
		1	49	23.50	23.69	23.63	0	0
		1	99	23.70	23.75	23.53	0	0
		50	0	22.39	22.58	22.60	0 - 1	1
		50	25	22.31	22.49	22.47	0 - 1	1
		50	49	22.45	22.53	22.37	0 - 1	1
		100	0	22.35	22.49	22.48	0 - 1	1
	16QAM	1	0	22.86	22.85	22.85	0 - 1	1
		1	49	22.73	22.81	22.79	0 - 1	1
		1	99	22.87	23.03	22.75	0 - 1	1
		50	0	21.36	21.57	21.62	0 - 2	2
		50	25	21.32	21.49	21.44	0 - 2	2
		50	49	21.47	21.56	21.39	0 - 2	2
		100	0	21.36	21.50	21.48	0 - 2	2
	64QAM	1	0	21.76	21.80	21.88	0 - 2	2
		1	49	21.45	21.62	21.62	0 - 2	2
		1	99	21.90	21.83	21.64	0 - 2	2
		50	0	20.41	20.60	20.58	0 - 3	3
		50	25	20.36	20.52	20.48	0 - 3	3
		50	49	20.45	20.58	20.37	0 - 3	3
		100	0	20.39	20.57	20.47	0 - 3	3
	256QAM	1	0	18.80	18.84	18.88	0 - 5	5
		1	49	18.33	18.50	18.49	0 - 5	5
		1	99	18.83	18.80	18.65	0 - 5	5
		50	0	18.41	18.59	18.59	0 - 5	5
		50	25	18.39	18.51	18.47	0 - 5	5
		50	49	18.50	18.57	18.40	0 - 5	5
		100	0	18.37	18.53	18.46	0 - 5	5

LTE Band 66 Conducted Power_Free(RSI0) _MAIN2[ANT.B]

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	17.82	17.92	17.91	0	0
		1	49	17.66	17.47	17.81	0	0
		1	99	17.89	17.85	17.73	0	0
		50	0	17.53	17.76	17.75	0 - 1	0
		50	25	17.49	17.70	17.64	0 - 1	0
		50	49	17.58	17.70	17.57	0 - 1	0
		100	0	17.50	17.67	17.59	0 - 1	0
	16QAM	1	0	18.00	18.07	18.17	0 - 1	0
		1	49	17.83	17.98	17.87	0 - 1	0
		1	99	18.13	18.16	17.88	0 - 1	0
		50	0	17.56	17.71	17.77	0 - 2	0
		50	25	17.49	17.67	17.60	0 - 2	0
		50	49	17.59	17.71	17.57	0 - 2	0
		100	0	17.52	17.68	17.63	0 - 2	0
	64QAM	1	0	17.92	18.01	18.01	0 - 2	0
		1	49	17.76	17.90	17.84	0 - 2	0
		1	99	18.05	17.95	17.91	0 - 2	0
		50	0	17.56	17.78	17.77	0 - 3	0
		50	25	17.51	17.67	17.62	0 - 3	0
		50	49	17.63	17.72	17.59	0 - 3	0
		100	0	17.55	17.69	17.67	0 - 3	0
	256QAM	1	0	18.01	18.01	18.01	0 - 5	0
		1	49	17.47	17.58	17.58	0 - 5	0
		1	99	17.95	17.99	17.85	0 - 5	0
		50	0	17.61	17.78	17.80	0 - 5	0
		50	25	17.55	17.69	17.66	0 - 5	0
		50	49	17.63	17.75	17.57	0 - 5	0
		100	0	17.53	17.70	17.65	0 - 5	0

LTE Band 66 Conducted Power_Pmax_SUB2[ANT.F]

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.73	24.01	24.30	0	0
		1	49	23.85	24.37	24.41	0	0
		1	99	23.94	24.50	24.32	0	0
		50	0	22.76	23.26	23.34	0 - 1	1
		50	25	22.70	23.37	23.32	0 - 1	1
		50	49	22.83	23.39	23.27	0 - 1	1
	16QAM	100	0	22.77	23.32	23.32	0 - 1	1
		1	0	22.98	23.19	23.63	0 - 1	1
		1	49	23.06	23.58	23.64	0 - 1	1
		1	99	23.17	23.66	23.61	0 - 1	1
		50	0	21.73	22.20	22.33	0 - 2	2
		50	25	21.74	22.29	22.30	0 - 2	2
	64QAM	50	49	21.83	22.41	22.25	0 - 2	2
		100	0	21.76	22.31	22.33	0 - 2	2
		1	0	21.86	22.21	22.46	0 - 2	2
		1	49	21.83	22.36	22.37	0 - 2	2
		1	99	22.11	22.64	22.47	0 - 2	2
		50	0	20.75	21.20	21.32	0 - 3	3
	256QAM	50	25	20.78	21.30	21.32	0 - 3	3
		50	49	20.85	21.37	21.30	0 - 3	3
		100	0	20.77	21.30	21.36	0 - 3	3
		1	0	18.81	19.15	19.45	0 - 5	5
		1	49	18.74	19.35	19.35	0 - 5	5
		1	99	19.01	19.54	19.45	0 - 5	5
		50	0	18.73	19.12	19.26	0 - 5	5
		50	25	18.69	19.19	19.23	0 - 5	5
		50	49	18.83	19.33	19.23	0 - 5	5
		100	0	18.73	19.22	19.25	0 - 5	5

LTE Band 66 Conducted Power_Free(RSI0), RCV(RSI1) _SUB2[ANT.F]

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	16.29	16.56	16.96	0	0
		1	49	16.62	17.23	17.11	0	0
		1	99	16.48	17.00	16.90	0	0
		50	0	16.26	16.64	16.81	0 - 1	0
		50	25	16.29	16.80	16.83	0 - 1	0
		50	49	16.60	17.18	17.00	0 - 1	0
		100	0	16.31	17.04	16.84	0 - 1	0
	16QAM	1	0	16.53	16.74	17.13	0 - 1	0
		1	49	16.62	17.12	17.23	0 - 1	0
		1	99	16.79	17.24	17.14	0 - 1	0
		50	0	16.25	16.72	16.89	0 - 2	0
		50	25	16.25	16.82	16.86	0 - 2	0
		50	49	16.30	16.88	16.81	0 - 2	0
		100	0	16.31	16.84	16.86	0 - 2	0
	64QAM	1	0	16.42	16.71	17.01	0 - 2	0
		1	49	16.51	17.06	17.11	0 - 2	0
		1	99	16.62	17.13	17.04	0 - 2	0
		50	0	16.27	16.69	16.89	0 - 3	0
		50	25	16.26	16.81	16.83	0 - 3	0
		50	49	16.35	16.92	16.84	0 - 3	0
		100	0	16.30	16.81	16.86	0 - 3	0
	256QAM	1	0	16.42	16.69	17.03	0 - 5	0
		1	49	16.21	16.71	16.72	0 - 5	0
		1	99	16.67	17.13	16.98	0 - 5	0
		50	0	16.27	16.73	16.86	0 - 5	0
		50	25	16.33	16.86	16.87	0 - 5	0
		50	49	16.37	16.93	16.86	0 - 5	0
		100	0	16.29	16.84	16.84	0 - 5	0

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 D05v02r05, are included, and the measurement results of other bandwidths are listed in Appendix K.

11.4.1 NR Band Maximum Conducted Power

NR Band n5 Conducted Power_Pmax, RCV(RSI1) _MAIN1[ANT.A]

NR Band n5_20 MHz Bandwidth Conducted Power

NR Band n3_20 MHz Bandwidth Conducted Power						Max.Average Power [dBm]			MPR [dB]
Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset		167300 Ch. 836.5 MHz		
20 MHz	15	DFT-s	pi/2 BPSK	1	1		24.52		0
				1	53		24.90		0
				1	104		24.79		0
				50	0		24.16		0.5
				50	28		24.74		0
				50	56		24.28		0.5
				100	0		24.23		0.5
			QPSK	1	1		24.58		0
				1	53		24.76		0
				1	104		24.84		0
				50	0		23.76		1
				50	28		24.77		0
				50	56		23.88		1
				100	0		23.69		1
			16QAM	1	1		23.63		1
			64QAM	1	1		22.22		2.5
			256QAM	1	1		19.97		4.5
		CP	QPSK	1	1		23.10		1.5

NR Band n5 Conducted Power_Free(RSI0) _MAIN1[ANT.A]

NR Band n5_20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							167300 Ch. 836.5 MHz		
20 MHz	15	DFT-s	pi/2 BPSK	1	1		20.98		0
				1	53		21.29		0
				1	104		21.19		0
				50	0		21.06		0
				50	28		21.13		0
				50	56		21.20		0
				100	0		21.10		0
			QPSK	1	1		21.00		0
				1	53		21.16		0
				1	104		21.24		0
				50	0		21.09		0
				50	28		21.18		0
				50	56		21.21		0
				100	0		21.12		0
			16QAM	1	1		21.02		0
			64QAM	1	1		21.12		0
			256QAM	1	1		19.72		1.5
		CP	QPSK	1	1		21.03		0

NR Band n41 Conducted Power_Pmax_MAIN2[ANT.B]

NR Band n41_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR [dB]
								518598 Ch. 2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			22.92		0
				1	137			23.37		0
				1	271			22.99		0
				135	0			22.52		0.5
				135	69			23.41		0
				135	138			22.56		0.5
				270	0			22.91		0.5
			QPSK	1	1			22.97		0
				1	137			23.38		0
				1	271			22.99		0
				135	0			22.04		1
				135	69			23.42		0
				135	138			22.07		1
				270	0			22.40		1
			16QAM	1	1			21.94		1
			64QAM	1	1			20.41		2.5
			256QAM	1	1			18.53		4.5
		CP	QPSK	1	1			21.72		1.5

NR Band n41 Conducted Power_Free(RSI0), RCV(RSI1) _MAIN2[ANT.B]

NR Band n41_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR [dB]
								518598 Ch. 2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			17.35		0
				1	137			17.83		0
				1	271			17.33		0
				135	0			17.49		0
				135	69			17.81		0
				135	138			17.43		0
				270	0			17.81		0
			QPSK	1	1			17.31		0
				1	137			17.76		0
				1	271			17.24		0
				135	0			17.48		0
				135	69			17.83		0
				135	138			17.43		0
				270	0			17.81		0
			16QAM	1	1			17.02		0
			64QAM	1	1			17.29		0
			256QAM	1	1			17.41		0
		CP	QPSK	1	1			17.31		0

NR Band n66 Conducted Power_Pmax, RCV(RSI1) _MAIN2[ANT.B]
NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							349000 Ch. 1745 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.96	0
				1	108		24.23	0
				1	214		24.37	0
				108	0		23.85	0.5
				108	54		24.23	0
				108	108		23.92	0.5
				216	0		23.72	0.5
			QPSK	1	1		24.11	0
				1	108		24.25	0
				1	214		24.46	0
				108	0		23.38	1
				108	54		24.29	0
				108	108		23.39	1
				216	0		23.19	1
			16QAM	1	1		23.04	1
			64QAM	1	1		21.62	2.5
			256QAM	1	1		19.49	4.5
		CP	QPSK	1	1		22.54	1.5

NR Band n66 Conducted Power_Free(RSI0) _MAIN2[ANT.B]
NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							349000 Ch. 1745 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		17.39	0
				1	108		17.72	0
				1	214		17.76	0
				108	0		17.74	0
				108	54		17.61	0
				108	108		17.73	0
				216	0		17.57	0
			QPSK	1	1		17.51	0
				1	108		17.60	0
				1	214		17.81	0
				108	0		17.73	0
				108	54		17.66	0
				108	108		17.74	0
				216	0		17.67	0
			16QAM	1	1		17.45	0
			64QAM	1	1		17.58	0
			256QAM	1	1		17.38	0
		CP	QPSK	1	1		17.52	0

NR Band n66 Conducted Power_Pmax_SUB2[ANT.F]

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							349000 Ch. 1745 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.44	0
				1	108		24.28	0
				1	214		24.33	0
				108	0		23.35	0.5
				108	54		24.25	0
				108	108		23.90	0.5
				216	0		23.74	0.5
			QPSK	1	1		23.59	0
				1	108		24.25	0
				1	214		24.40	0
				108	0		22.98	1
				108	54		24.25	0
				108	108		23.46	1
				216	0		23.23	1
			16QAM	1	1		22.53	1
			64QAM	1	1		21.20	2.5
			256QAM	1	1		18.90	4.5
		CP	QPSK	1	1		22.03	1.5

NR Band n66 Conducted Power_Free(RSI0), RCV(RSI1) _SUB2[ANT.F]

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							349000 Ch. 1745 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		16.22	0
				1	108		16.99	0
				1	214		17.09	0
				108	0		16.60	0
				108	54		16.98	0
				108	108		17.12	0
				216	0		16.95	0
			QPSK	1	1		16.28	0
				1	108		16.97	0
				1	214		17.27	0
				108	0		16.63	0
				108	54		17.00	0
				108	108		17.23	0
				216	0		16.99	0
			16QAM	1	1		16.27	0
			64QAM	1	1		16.38	0
			256QAM	1	1		16.24	0
		CP	QPSK	1	1		16.71	0

NR Band n77 Conducted Power (Power Class 2)_Pmax _SUB3[ANT.G]

NR Band n77_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR [dB]
						650000 Ch. 3750 MHz				662000 Ch. 3930 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1	25.94				25.08	0
				1	137	25.67				25.56	0
				1	271	26.19				25.64	0
				135	0	25.08				24.54	0.5
				135	69	25.75				25.57	0
				135	138	25.38				25.01	0.5
				270	0	25.25				25.02	0.5
			QPSK	1	1	25.94				25.04	0
				1	137	25.71				25.56	0
				1	271	26.18				25.63	0
				135	0	24.60				24.06	1
				135	69	25.78				25.58	0
				135	138	24.91				24.52	1
				270	0	24.75				24.54	1
			16QAM	1	1	24.98				24.09	1
			64QAM	1	1	23.41				22.52	2.5
			256QAM	1	1	21.50				20.59	4.5
		CP	QPSK	1	1	24.36				23.42	1.5

NR Band n77 Conducted Power (Power Class 2)_Free(RSI0) _SUB3[ANT.G]

NR Band n77_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR [dB]
						650000 Ch. 3750 MHz				662000 Ch. 3930 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1	15.00				14.61	0
				1	137	14.58				14.69	0
				1	271	15.04				14.76	0
				135	0	14.50				14.34	0
				135	69	14.60				14.69	0
				135	138	14.73				14.56	0
				270	0	14.62				14.71	0
			QPSK	1	1	15.02				14.61	0
				1	137	14.58				14.69	0
				1	271	15.05				14.94	0
				135	0	14.48				14.36	0
				135	69	14.59				14.85	0
				135	138	14.93				14.57	0
				270	0	14.62				14.85	0
			16QAM	1	1	14.98				14.56	0
			64QAM	1	1	14.97				14.57	0
			256QAM	1	1	14.91				14.53	0
		CP	QPSK	1	1	15.04				14.52	0

NR Band n77 Conducted Power (Power Class 2)_RCV(RSI1)_SUB3[ANT.G]
NR Band n77_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR [dB]
						650000 Ch. 3750 MHz				662000 Ch. 3930 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1	13.59				13.53	0
				1	137	13.49				13.63	0
				1	271	13.98				13.68	0
				135	0	13.42				13.29	0
				135	69	13.55				13.65	0
				135	138	13.69				13.51	0
				270	0	13.55				13.64	0
			QPSK	1	1	13.95				13.50	0
				1	137	13.52				13.73	0
				1	271	14.11				13.85	0
				135	0	13.42				13.35	0
				135	69	13.55				13.74	0
				135	138	13.96				13.49	0
				270	0	13.55				13.62	0
			16QAM	1	1	13.90				13.49	0
			64QAM	1	1	13.89				13.49	0
			256QAM	1	1	13.84				13.48	0
		CP	QPSK	1	1	14.05				13.61	0

NR Band n77 DoD Conducted Power (Power Class 2)_Pmax_SUB3[ANT.G]
NR Band n77 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							633334 Ch. 3500.01 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1		24.99		0
				1	137		25.56		0
				1	271		25.76		0
				135	0		24.67		0.5
				135	69		25.57		0
				135	138		25.19		0.5
				270	0		25.08		0.5
			QPSK	1	1		25.05		0
				1	137		25.63		0
				1	271		25.80		0
				135	0		24.23		1
				135	69		25.60		0
				135	138		24.73		1
				270	0		24.61		1
			16QAM	1	1		24.02		1
			64QAM	1	1		22.39		2.5
			256QAM	1	1		20.58		4.5
		CP	QPSK	1	1		23.39		1.5

NR Band n77 DoD Conducted Power (Power Class 2)_Free(RSI0)_SUB3[ANT.G]
NR Band n77 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							633334 Ch. 3500.01 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1		14.68	0
				1	137		14.68	0
				1	271		14.64	0
				135	0		14.38	0
				135	69		14.68	0
				135	138		14.68	0
				270	0		14.66	0
			QPSK	1	1		14.32	0
				1	137		14.89	0
				1	271		14.65	0
				135	0		14.39	0
				135	69		14.89	0
				135	138		14.68	0
				270	0		14.67	0
			16QAM	1	1		14.26	0
			64QAM	1	1		14.28	0
			256QAM	1	1		14.20	0
		CP	QPSK	1	1		14.74	0

NR Band n77 DoD Conducted Power (Power Class 2)_RCV(RSI1)_SUB3[ANT.G]
NR Band n77 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							633334 Ch. 3500.01 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1		13.65	0
				1	137		13.65	0
				1	271		13.61	0
				135	0		13.34	0
				135	69		13.64	0
				135	138		13.64	0
				270	0		13.61	0
			QPSK	1	1		13.24	0
				1	137		13.87	0
				1	271		13.62	0
				135	0		13.33	0
				135	69		13.85	0
				135	138		13.64	0
				270	0		13.61	0
			16QAM	1	1		13.23	0
			64QAM	1	1		13.24	0
			256QAM	1	1		13.13	0
		CP	QPSK	1	1		13.75	0

11.4.2 NR Band SRS Conducted Power

[NR TDD Band n41 SRS Conducted Power]

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna F/ SUB2, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				518598	[dB]
				2592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	21.39	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	17.53	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna H/ SUB4, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				518598	[dB]
				2592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	20.25	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	17.46	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna E/ SUB1, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				518598	[dB]
				2592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	18.75	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	17.81	0

11.5 WIFI Conducted Power measurement method

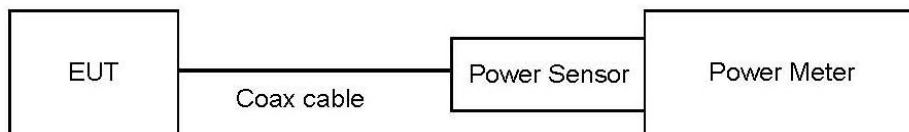
Un-Licensed Bands (DTS Band)

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



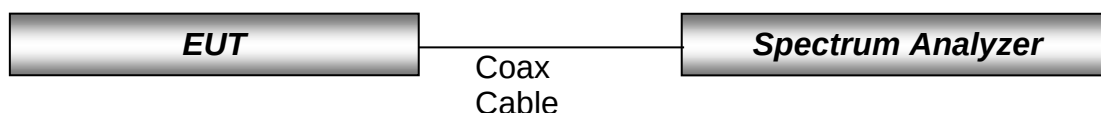
Un-Licensed Bands (NII Band)

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) Reduced Conducted Power

RSI = 1(Head)

Mode	Frequency [MHz]	Channel	Plimit (Head)_SISO/MIMO		
			IEEE 802.11 (2.4 GHz) Average Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	13.54	13.44	16.50
	2 437	6	13.60	13.56	16.59
	2 462	11	13.04	13.17	16.12

RSI = 0(Non-Head)

Mode	Frequency [MHz]	Channel	Plimit (Body)_SISO/MIMO		
			IEEE 802.11 (2.4 GHz) Average Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	14.51	14.37	17.45
	2 437	6	14.83	14.95	17.90
	2 462	11	14.37	14.17	17.28

11.5.2 IEEE 802.11 (5 GHz) Maximum and Reduced Conducted Power

RSI = 1(Head)

Frequency [MHz]	Channel	Plimit (Head)_SISO/MIMO		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 210	42	8.94	7.87	11.45
5 290	58	8.98	7.67	11.38
5 530	106	8.92	7.53	11.29
5 610	122	8.38	7.52	10.98
5 690	138	8.96	7.61	11.34
5 775	155	8.98	8.04	11.54
5 855	171	8.95	8.61	11.79

RSI = 0(Non-Head)

Frequency [MHz]	Channel	Plimit (Body)_SISO		
		IEEE 802.11 n (40 MHz BW) Conducted Power [dBm]		
		Ant.1		
5 270	54	11.98		
Frequency [MHz]	Channel	Plimit (Body)_MIMO		
		IEEE 802.11 n (40 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 270	54	11.90	10.62	14.32

Frequency [MHz]	Channel	Plimit (Body) _SISO		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1		
5 210	42	11.41		
5 610	122	10.95		
5 690	138	11.83		
5 775	155	11.40		
5 855	171	11.55		
Frequency [MHz]	Channel	Plimit (Body) _MIMO		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 210	42	11.41	10.12	13.82
5 610	122	10.95	10.11	13.56
5 690	138	11.83	10.23	14.11
5 775	155	11.76	11.57	14.68
5 855	171	10.97	11.54	14.27

Note:

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

11.6.1 Bluetooth Maximum Conducted Power (Pmax / Body)

Bluetooth SISO Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1
DH5	0	13.87
	39	13.52
	78	13.55

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1
LE 1M (193)	37	13.45
	17	13.77
	39	13.68

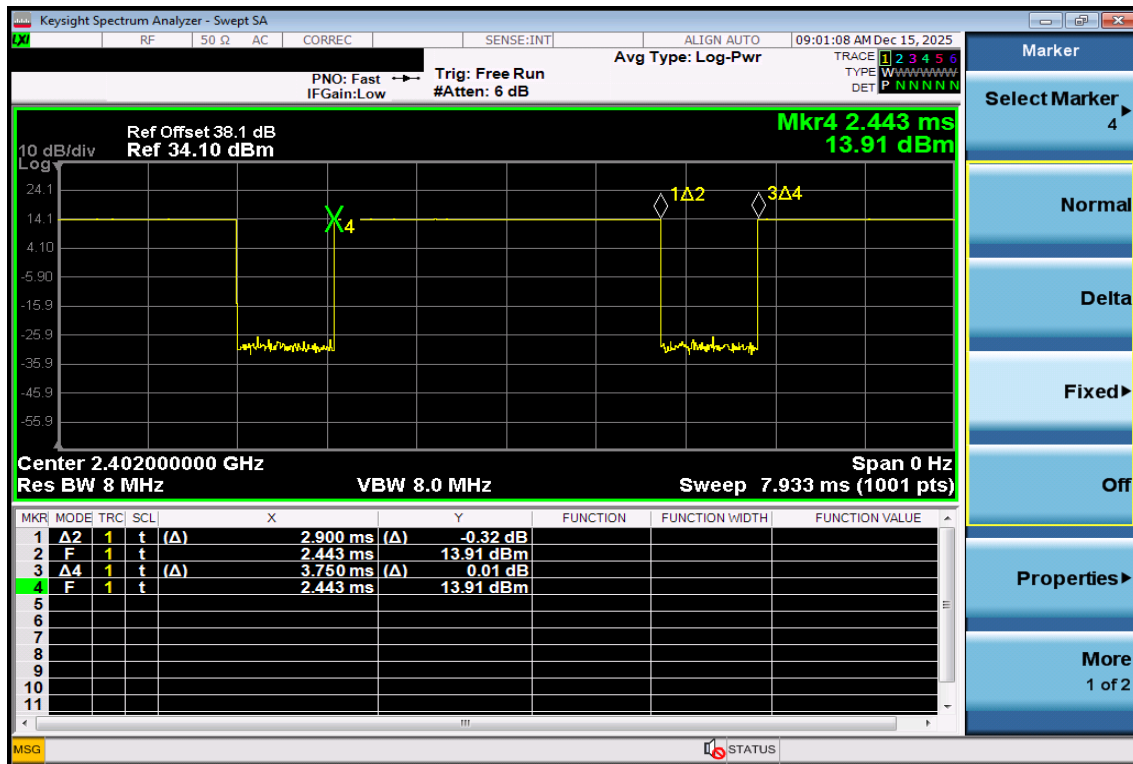
11.6.2 Bluetooth Reduced Conducted Power – Receiver Active (Head)

Bluetooth SISO Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1
2-DH5	0	10.43
	39	11.31
	78	11.99

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1
LE 125k (255)	37	10.19
	17	10.87
	39	10.85

Bluetooth DH 5 Mode



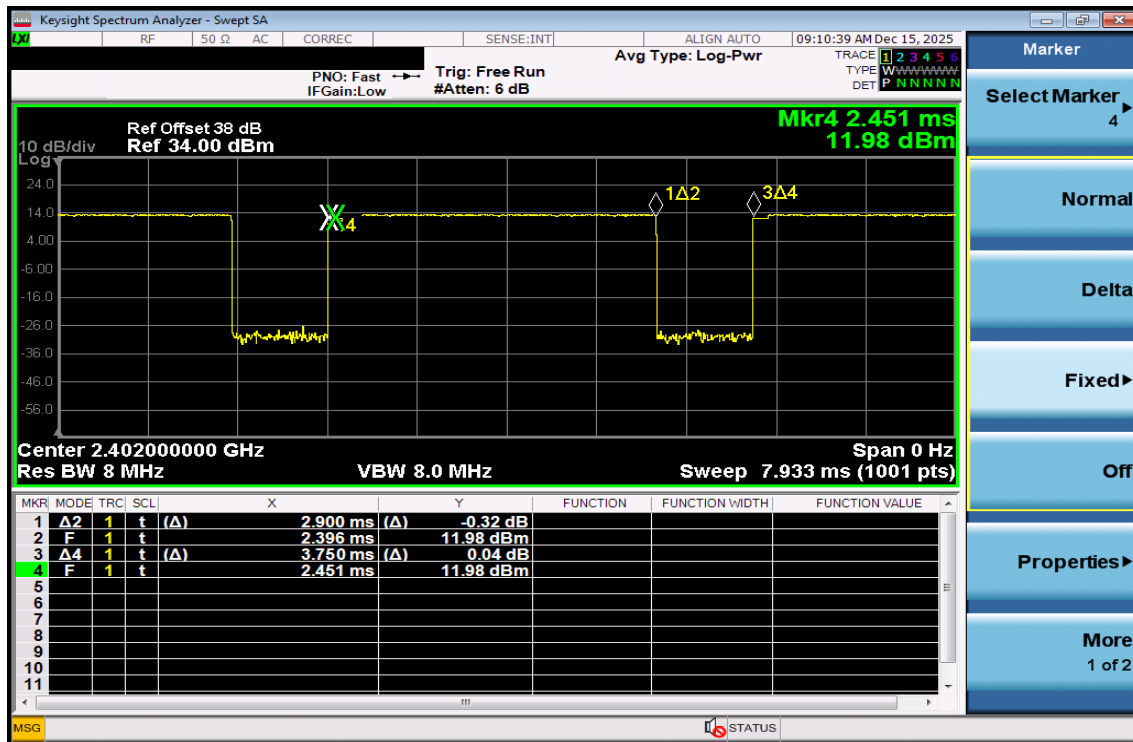
Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.900 / 3.750) = 0.773 \text{ (DH5)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 78.0 %. 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 77.3%, 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 2-DH 5 Mode



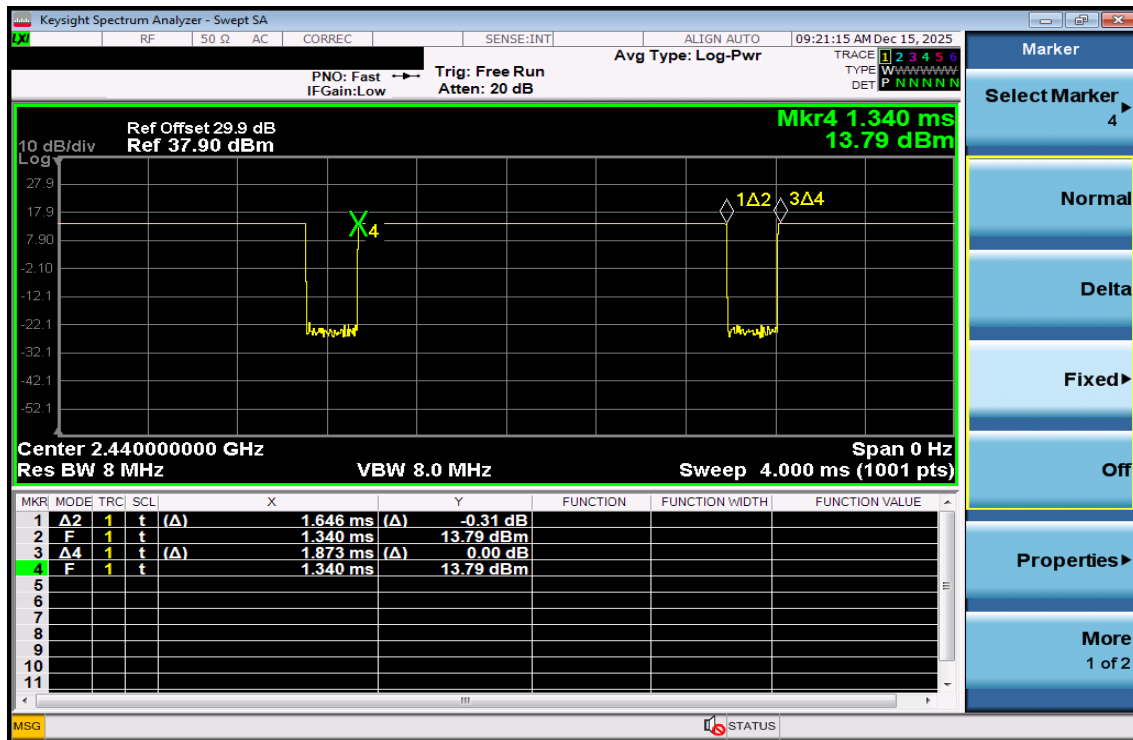
Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.900 / 3.750) = 0.773 \text{ (2-DH5)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 78.0 % 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 2-DH5 measured by DUT was 77.3%, 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 LE 1M Mode



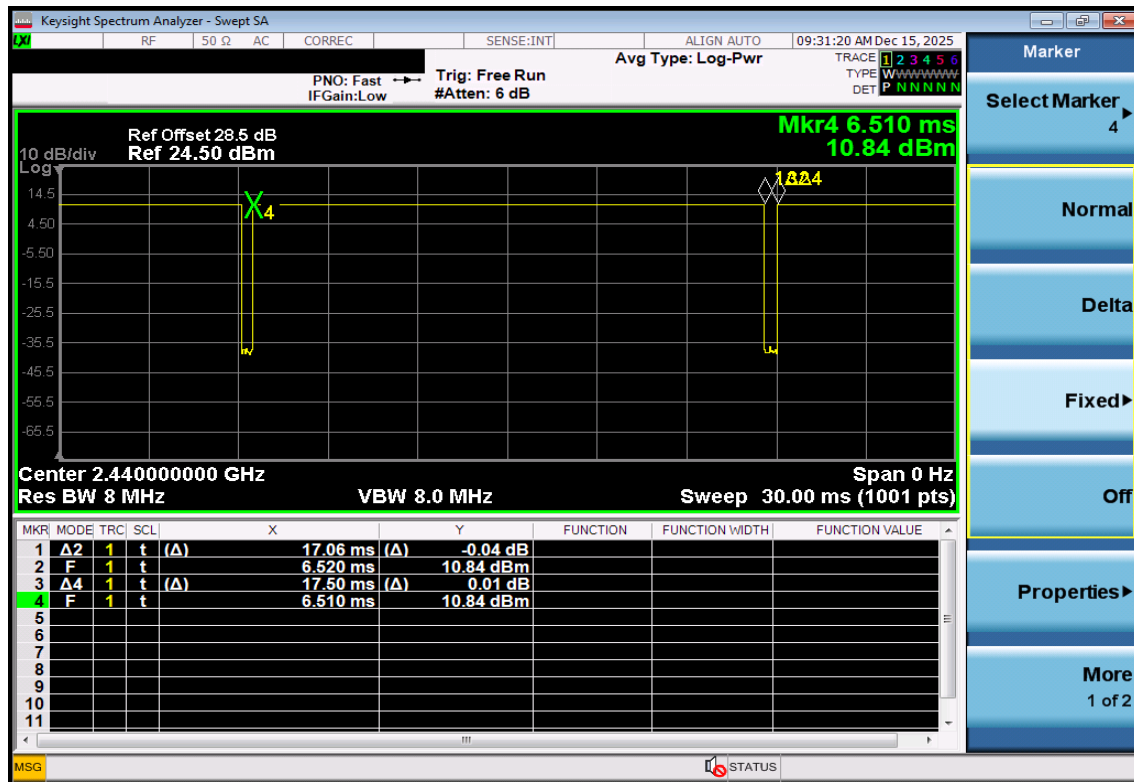
Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (1.646 / 1.873) = 0.879 \text{ (1M)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 88.69 % 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 LE 1M measured by DUT was 87.9%, 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 LE 125k Mode



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (17.06 / 17.50) = 0.975 \text{ (1M)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 98.38 % 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 LE 125k measured by DUT was 97.5%, 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 head simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

◆ GSM/UMTS/LTE/WLAN/NFC/5G NR SUB 6 Band

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
12/10/2025	22.8	13H	12	0.739	54.433	0.750	55.000	- 1.41	- 1.03
			13	0.735	54.100	0.750	55.000	- 1.95	- 1.62
			14	0.746	54.205	0.750	55.000	- 0.55	- 1.45
12/01/2025	20.3	750H	705	0.871	43.021	0.889	42.174	- 2.04	+ 2.01
			710	0.870	43.024	0.890	42.148	- 2.26	+ 2.08
			750	0.894	42.980	0.893	41.940	+ 0.10	+ 2.48
11/18/2025	20.9	750H	750	0.892	43.160	0.893	41.940	- 0.14	+ 2.91
			785	0.902	42.873	0.896	41.758	+ 0.67	+ 2.67
11/29/2025	21.8	835H	820	0.931	42.670	0.899	41.577	+ 3.56	+ 2.63
			835	0.932	42.560	0.900	41.500	+ 3.59	+ 2.55
			850	0.935	42.383	0.916	41.500	+ 2.11	+ 2.13
12/22/2025	22.6	835H	820	0.932	42.613	0.899	41.577	+ 3.71	+ 2.49
			835	0.935	42.644	0.900	41.500	+ 3.86	+ 2.76
			850	0.941	42.401	0.916	41.500	+ 2.68	+ 2.17
11/30/2025	21.6	835H	820	0.932	42.678	0.899	41.577	+ 3.70	+ 2.65
			835	0.933	42.582	0.900	41.500	+ 3.62	+ 2.61
			850	0.937	42.407	0.916	41.500	+ 2.25	+ 2.19
12/03/2025	21.8	835H	820	0.929	42.854	0.899	41.577	+ 3.38	+ 3.07
			835	0.933	42.599	0.900	41.500	+ 3.67	+ 2.65
			850	0.940	42.641	0.916	41.500	+ 2.63	+ 2.75
12/04/2025	22.2	835H	820	0.925	42.636	0.899	41.577	+ 2.88	+ 2.55
			835	0.930	42.532	0.900	41.500	+ 3.32	+ 2.49
			850	0.939	42.467	0.916	41.500	+ 2.47	+ 2.33
11/20/2025	20.4	1 800H	1 710	1.301	39.864	1.348	40.144	- 3.46	- 0.70
			1 750	1.322	39.887	1.371	40.080	- 3.60	- 0.48
			1 800	1.360	39.800	1.400	40.000	- 3.14	- 0.41

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
11/20/2025	20.7	1 800H	1 710	1.307	40.050	1.348	40.144	- 3.04	- 0.23
			1 750	1.338	40.069	1.371	40.080	- 2.37	- 0.03
			1 800	1.380	40.205	1.400	40.000	- 1.41	+ 0.51
12/01/2025	20.6	1 800H	1 710	1.310	39.988	1.348	40.144	- 2.80	- 0.39
			1 750	1.340	39.914	1.371	40.080	- 2.27	- 0.41
			1 800	1.380	39.900	1.400	40.000	- 1.35	- 0.29
11/25/2025	20.8	1 800H	1 710	1.293	40.384	1.348	40.144	- 4.10	+ 0.60
			1 750	1.313	40.407	1.371	40.080	- 4.24	+ 0.82
			1 800	1.350	40.400	1.400	40.000	- 3.78	+ 0.89
12/09/2025	21.6	1 800H	1 710	1.299	40.098	1.348	40.144	- 3.63	- 0.11
			1 750	1.327	40.163	1.371	40.080	- 3.21	+ 0.21
			1 800	1.360	40.000	1.400	40.000	- 3.06	+ 0.03
11/24/2025	21.1	1 900H	1 850	1.418	39.836	1.400	40.000	+ 1.32	- 0.41
			1 900	1.440	39.600	1.400	40.000	+ 3.00	- 1.12
			1 910	1.440	39.662	1.400	40.000	+ 2.87	- 0.85
11/21/2025	20.5	1 900H	1 850	1.383	39.941	1.400	40.000	- 1.24	- 0.15
			1 900	1.410	39.800	1.400	40.000	+ 0.71	- 0.48
			1 910	1.414	39.786	1.400	40.000	+ 1.03	- 0.54
11/19/2025	21.1	1 900H	1 850	1.414	40.045	1.400	40.000	+ 0.99	+ 0.11
			1 900	1.445	39.906	1.400	40.000	+ 3.21	- 0.24
			1 910	1.448	39.706	1.400	40.000	+ 3.41	- 0.73
11/28/2025	20.8	1 900H	1 850	1.387	39.963	1.400	40.000	- 0.91	- 0.09
			1 900	1.410	39.900	1.400	40.000	+ 1.06	- 0.28
			1 910	1.413	39.574	1.400	40.000	+ 0.91	- 1.06
12/06/2025	22.1	2 450H	2 400	1.798	39.087	1.756	39.290	+ 2.42	- 0.52
			2 450	1.833	39.068	1.800	39.200	+ 1.85	- 0.34
			2 500	1.877	39.346	1.855	39.140	+ 1.21	+ 0.53
12/07/2025	22.5	2 450H	2 400	1.792	39.234	1.756	39.290	+ 2.06	- 0.14
			2 450	1.835	39.218	1.800	39.200	+ 1.94	+ 0.05
			2 500	1.877	39.486	1.855	39.140	+ 1.16	+ 0.88

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
12/08/2025	23.3	2 450H	2 400	1.801	39.286	1.756	39.290	+2.58	-0.01
			2 450	1.827	39.282	1.800	39.200	+1.49	+0.21
			2 500	1.883	39.264	1.855	39.140	+1.52	+0.32
12/09/2025	22.8	2 450H	2 400	1.793	39.312	1.756	39.290	+2.11	+0.05
			2 450	1.825	39.211	1.800	39.200	+1.37	+0.03
			2 500	1.881	39.303	1.855	39.140	+1.38	+0.42
12/02/2025	21.3	2 600H	2 500	1.883	39.192	1.855	39.140	+1.49	+0.13
			2 600	2.003	39.053	1.964	39.010	+1.99	+0.11
			2 690	2.115	38.351	2.062	38.894	+2.58	-1.40
11/19/2025	21.2	2 600H	2 500	1.886	39.405	1.855	39.140	+1.65	+0.68
			2 600	2.011	39.220	1.964	39.010	+2.38	+0.54
			2 690	2.121	38.363	2.062	38.894	+2.86	-1.37
12/10/2025	22.8	2 600H	2 500	1.875	39.313	1.855	39.140	+1.09	+0.44
			2 600	2.011	39.169	1.964	39.010	+2.41	+0.41
			2 690	2.114	38.312	2.062	38.894	+2.52	-1.50
12/11/2025	22.2	2 600H	2 500	1.874	39.384	1.855	39.140	+1.00	+0.62
			2 600	2.002	38.992	1.964	39.010	+1.94	-0.05
			2 690	2.110	38.502	2.062	38.894	+2.34	-1.01
12/13/2025	21.4	2 600H	2 500	1.875	39.467	1.855	39.140	+1.06	+0.83
			2 600	2.000	38.975	1.964	39.010	+1.84	-0.09
			2 690	2.107	38.279	2.062	38.894	+2.18	-1.58
12/02/2025	21.3	3 500H-3 970H	3 400	2.844	38.850	2.810	38.040	+1.19	+2.13
			3 500	2.924	38.498	2.913	37.930	+0.37	+1.50
			3 550	2.965	38.463	2.964	37.870	+0.04	+1.57
			3 700	3.102	38.401	3.118	37.700	-0.51	+1.86
			3 750	3.166	38.236	3.169	37.640	-0.08	+1.58
			3 800	3.214	38.184	3.220	37.590	-0.17	+1.58
			3 900	3.312	38.138	3.233	37.470	+2.44	+1.78
			3 970	3.373	37.744	3.394	37.390	-0.62	+0.95

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
11/21/2025	21.0	5 180H-5 320H	5 180	4.671	35.283	4.635	36.010	+ 0.78	- 2.02
			5 250	4.761	35.124	4.706	35.930	+ 1.17	- 2.24
			5 280	4.813	34.980	4.737	35.894	+ 1.61	- 2.55
			5 320	4.867	34.986	4.778	35.846	+ 1.87	- 2.40
11/22/2025	22.0	5 500H-5 600H	5 500	5.034	34.897	4.963	35.640	+ 1.43	- 2.08
			5 600	5.146	34.761	5.065	35.530	+ 1.60	- 2.16
			5 750	5.354	34.501	5.219	35.360	+ 2.58	- 2.43
11/23/2025	21.7	5 750H-5 825H	5 750	5.353	34.389	5.219	35.360	+ 2.57	- 2.75
			5 800	5.287	34.363	5.270	35.300	+ 0.32	- 2.65
			5 825	5.237	34.611	5.296	35.270	- 1.11	- 1.87
11/24/2025	22.6	5 800H-5 885H	5 800	5.299	34.607	5.270	35.300	+ 0.55	- 1.96
			5 835	5.245	34.386	5.306	35.258	- 1.15	- 2.47
			5 845	5.237	34.456	5.316	35.246	- 1.49	- 2.24
			5 855	5.235	34.413	5.326	35.235	- 1.70	- 2.33
			5 865	5.231	34.201	5.337	35.225	- 1.98	- 2.91
			5 875	5.246	34.249	5.347	35.215	- 1.89	- 2.74
			5 885	5.265	34.268	5.357	35.205	- 1.73	- 2.66

12.2 System Verification

◆ GSM/ UMTS/ LTE/ WLAN Band – Head, Bodyworn, Hotspot SAR

Input Power: 50 mW

Freq.	Date	Probe	Dipole	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit
[MHz]		(S/N)	(S/N)		[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	12/01/2025	7732	1014	Head	20.5	20.3	8.80	0.419	8.38	-4.77	± 10
750	11/18/2025	7732	1014	Head	21.0	20.9	8.80	0.420	8.40	-4.55	± 10
835	12/03/2025	7732	441	Head	22.0	21.8	9.73	0.488	9.76	+0.31	± 10
835	11/29/2025	7732	441	Head	22.0	21.8	9.73	0.478	9.56	-1.75	± 10
835	12/22/2025	7732	441	Head	22.7	22.6	9.73	0.517	10.34	+ 6.27	± 10
835	11/30/2025	7732	441	Head	21.7	21.6	9.73	0.496	9.92	+1.95	± 10
1 800	11/20/2025	3797	2d015	Head	20.5	20.4	38.10	2.050	41.00	+7.61	± 10
1 800	11/20/2025	3797	2d015	Head	20.8	20.7	38.10	1.770	35.40	-7.09	± 10
1 800	12/01/2025	3903	2d015	Head	20.7	20.6	38.10	1.790	35.80	-6.04	± 10
1900	11/21/2025	3797	5d061	Head	20.7	20.5	38.80	1.920	38.40	-1.03	± 10
1 900	11/24/2025	3797	5d061	Head	21.3	21.1	38.80	2.010	40.20	+3.61	± 10
1 900	11/19/2025	3797	5d061	Head	21.3	21.1	38.80	2.090	41.80	+7.73	± 10
1 900	11/28/2025	3903	5d061	Head	21.0	20.8	38.80	2.050	41.00	+5.67	± 10
2 450	12/06/2025	7732	1049	Head	22.3	22.1	52.60	2.530	50.60	-3.80	± 10
2 450	12/07/2025	7732	1049	Head	22.6	22.5	52.60	2.530	50.60	-3.80	± 10
2 450	12/08/2025	7732	1049	Head	23.4	23.3	52.60	2.690	53.80	+2.28	± 10
2 450	12/09/2025	7732	1049	Head	22.9	22.8	52.60	2.730	54.60	+3.80	± 10
2 600	12/02/2025	7732	1106	Head	21.4	21.3	55.70	2.700	54.00	-3.05	± 10
5 250	11/21/2025	7654	1107	Head	21.1	21.0	80.20	3.870	77.40	-3.49	± 10
5 600	11/22/2025	7654	1107	Head	22.1	22.0	82.10	4.200	84.00	+2.31	± 10
5 750	11/23/2025	7654	1107	Head	21.8	21.7	79.90	3.740	74.80	-6.38	± 10
5 800	11/24/2025	7654	1107	Head	22.8	22.6	79.30	3.950	79.00	-0.38	± 10

◆ 5G NR SUB 6 Band - Head, Bodyworn, Hotspot SAR

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
835	12/04/2025	7732	441	Head	22.3	22.2	9.73	0.498	9.96	+2.36	± 10
1 800	11/25/2025	3797	2d015	Head	20.9	20.8	38.10	2.040	40.80	+7.09	± 10
1 800	12/09/2025	3903	2d015	Head	21.8	21.6	38.10	1.760	35.20	-7.61	± 10
2 600	11/19/2025	7732	1106	Head	21.3	21.2	55.70	2.710	54.20	-2.69	± 10
2 600	12/10/2025	7732	1106	Head	23.0	22.8	55.70	2.630	52.40	-5.92	± 10
2 600	12/11/2025	7732	1106	Head	22.4	22.2	55.70	2.620	52.60	-5.57	± 10
2 600	12/13/2025	7732	1106	Head	21.6	21.4	55.70	2.620	52.40	-5.92	± 10
3 500	12/02/2025	7654	1040	Head	21.4	21.3	65.20	3.350	67.00	+2.76	± 10
3 700	12/02/2025	7654	1066	Head	21.4	21.3	67.70	3.190	63.80	-5.76	± 10
3 900	12/02/2025	7654	1019	Head	21.4	21.3	70.30	3.190	63.80	-9.25	± 10

◆ System Verification Results – Extremity SAR

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{10g} (SPEAG)	50 mW Measured SAR _{10g}	1 W Normalized SAR _{10g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
13	12/10/2025	3076	1016	Head	22.9	22.8	0.333	0.017	0.340	+ 2.10	± 10
5 250	11/21/2025	7654	1107	Head	21.1	21.0	23.10	1.100	22.00	- 4.76	± 10
5 600	11/22/2025	7654	1107	Head	22.1	22.0	23.50	1.170	23.40	- 0.43	± 10
5 800	11/24/2025	7654	1107	Head	22.8	22.6	22.50	1.110	22.20	- 1.33	± 10

12.3 SAR Test System Verification Procedure

SAR measurement was prior to assessment; the system is verified to the $\pm 10\%$ of the specifications at each frequency Band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- 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.

Note;

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

13. SAR Test Data Summary

13.1 SAR Measurement Results

13.1.1 Head SAR Measurement Results

GSM 850 Head SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GSM Voice	A	34.0	33.24	0.11	Left Cheek	1:8.3	0.126	1.191	0.150	-
836.6	190	GSM Voice	A	34.0	33.24	0.19	Left Tilt	1:8.3	0.085	1.191	0.101	-
836.6	190	GSM Voice	A	34.0	33.24	0.19	Right Cheek	1:8.3	0.159	1.191	0.189	-
836.6	190	GSM Voice	A	34.0	33.24	0.11	Right Tilt	1:8.3	0.086	1.191	0.102	-
836.6	190	GPRS 4Tx	A	29.5	27.91	-0.10	Left Cheek	1:2.07	0.169	1.442	0.244	-
836.6	190	GPRS 4Tx	A	29.5	27.91	0.11	Left Tilt	1:2.07	0.106	1.442	0.153	-
836.6	190	GPRS 4Tx	A	29.5	27.91	0.16	Right Cheek	1:2.07	0.218	1.442	0.314	A1
836.6	190	GPRS 4Tx	A	29.5	27.91	-0.14	Right Tilt	1:2.07	0.112	1.442	0.162	-
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												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GSM Voice	B	31.5	29.81	0.19	Left Cheek	1:8.3	0.049	1.476	0.072	-
1 880	661	GSM Voice	B	31.5	29.81	0.12	Left Tilt	1:8.3	0.032	1.476	0.047	-
1 880	661	GSM Voice	B	31.5	29.81	0.14	Right Cheek	1:8.3	0.058	1.476	0.086	-
1 880	661	GSM Voice	B	31.5	29.81	-0.08	Right Tilt	1:8.3	0.051	1.476	0.075	-
1 880	661	GPRS 3Tx	B	28.0	26.39	-0.05	Left Cheek	1:2.77	0.075	1.449	0.109	A2
1 880	661	GPRS 3Tx	B	28.0	26.39	-0.04	Left Tilt	1:2.77	0.059	1.449	0.085	-
1 880	661	GPRS 3Tx	B	28.0	26.39	0.04	Right Cheek	1:2.77	0.059	1.449	0.085	-
1 880	661	GPRS 3Tx	B	28.0	26.39	0.08	Right Tilt	1:2.77	0.054	1.449	0.078	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 2 Head SAR											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	B	25.0	23.06	-0.06	Left Cheek	0.035	1.563	0.055	A3
1 880	9400	RMC	B	25.0	23.06	0.00	Left Tilt	0.022	1.563	0.034	-
1 880	9400	RMC	B	25.0	23.06	0.09	Right Cheek	0.031	1.563	0.048	-
1 880	9400	RMC	B	25.0	23.06	0.18	Right Tilt	0.020	1.563	0.031	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram				

UMTS Band 4 Head SAR											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	B	25.0	24.13	0.04	Left Cheek	0.038	1.222	0.046	-
1 732.4	1412	RMC	B	25.0	24.13	-0.06	Left Tilt	0.026	1.222	0.032	-
1 732.4	1412	RMC	B	25.0	24.13	0.13	Right Cheek	0.039	1.222	0.048	A4
1 732.4	1412	RMC	B	25.0	24.13	-0.02	Right Tilt	0.026	1.222	0.032	-
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											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	25.0	23.55	-0.14	Left Cheek	0.076	1.396	0.106	-
836.6	4183	RMC	A	25.0	23.55	0.15	Left Tilt	0.046	1.396	0.064	-
836.6	4183	RMC	A	25.0	23.55	0.15	Right Cheek	0.085	1.396	0.119	A5
836.6	4183	RMC	A	25.0	23.55	-0.16	Right Tilt	0.061	1.396	0.085	-
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																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	25.5	25.27	-0.15	Left Cheek	0	1	0	1:1	0.167	1.054	0.176	-
707.5	23095	QPSK	A	10	24.5	24.25	0.00	Left Cheek	1	25	0	1:1	0.132	1.059	0.140	-
707.5	23095	QPSK	A	10	25.5	25.27	0.11	Left Tilt	0	1	0	1:1	0.106	1.054	0.112	-
707.5	23095	QPSK	A	10	24.5	24.25	0.12	Left Tilt	1	25	0	1:1	0.085	1.059	0.090	-
707.5	23095	QPSK	A	10	25.5	25.27	-0.11	Right Cheek	0	1	0	1:1	0.194	1.054	0.204	A6
707.5	23095	QPSK	A	10	24.5	24.25	0.16	Right Cheek	1	25	0	1:1	0.151	1.059	0.160	-
707.5	23095	QPSK	A	10	25.5	25.27	0.15	Right Tilt	0	1	0	1:1	0.102	1.054	0.108	-
707.5	23095	QPSK	A	10	24.5	24.25	0.11	Right Tilt	1	25	0	1:1	0.077	1.059	0.082	-
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																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	25.0	23.97	-0.09	Left Cheek	0	1	24	1:1	0.129	1.268	0.164	-
782	23230	QPSK	A	10	24.0	22.84	0.17	Left Cheek	1	25	24	1:1	0.095	1.306	0.124	-
782	23230	QPSK	A	10	25.0	23.97	0.13	Left Tilt	0	1	24	1:1	0.073	1.268	0.093	-
782	23230	QPSK	A	10	24.0	22.84	0.12	Left Tilt	1	25	24	1:1	0.055	1.306	0.072	-
782	23230	QPSK	A	10	25.0	23.97	-0.09	Right Cheek	0	1	24	1:1	0.130	1.268	0.165	A7
782	23230	QPSK	A	10	24.0	22.84	0.14	Right Cheek	1	25	24	1:1	0.102	1.306	0.133	-
782	23230	QPSK	A	10	25.0	23.97	0.11	Right Tilt	0	1	24	1:1	0.079	1.268	0.100	-
782	23230	QPSK	A	10	24.0	22.84	0.19	Right Tilt	1	25	24	1:1	0.062	1.306	0.081	-
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 25 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 860	26140	QPSK	B	20	25.0	24.36	-0.16	Left Cheek	0	1	0	1:1	0.145	1.159	0.168	-
1 860	26140	QPSK	B	20	24.0	23.28	0.17	Left Cheek	1	50	0	1:1	0.113	1.180	0.133	-
1 860	26140	QPSK	B	20	25.0	24.36	-0.02	Left Tilt	0	1	0	1:1	0.097	1.159	0.112	-
1 860	26140	QPSK	B	20	24.0	23.28	-0.15	Left Tilt	1	50	0	1:1	0.061	1.180	0.072	-
1 860	26140	QPSK	B	20	25.0	24.36	-0.19	Right Cheek	0	1	0	1:1	0.170	1.159	0.197	-
1 860	26140	QPSK	B	20	24.0	23.28	0.12	Right Cheek	1	50	0	1:1	0.124	1.180	0.146	-
1 860	26140	QPSK	B	20	25.0	24.36	0.16	Right Tilt	0	1	0	1:1	0.118	1.159	0.137	-
1 860	26140	QPSK	B	20	24.0	23.28	-0.02	Right Tilt	1	50	0	1:1	0.087	1.180	0.103	-
1 905	26590	QPSK	F	20	18.0	17.21	0.01	Left Cheek	0	1	49	1:1	0.236	1.199	0.283	-
1 905	26590	QPSK	F	20	18.0	17.09	-0.03	Left Cheek	0	50	49	1:1	0.219	1.233	0.270	-
1 905	26590	QPSK	F	20	18.0	17.21	-0.04	Left Tilt	0	1	49	1:1	0.298	1.199	0.357	-
1 905	26590	QPSK	F	20	18.0	17.09	-0.08	Left Tilt	0	50	49	1:1	0.288	1.233	0.355	-
1 905	26590	QPSK	F	20	18.0	17.21	-0.05	Right Cheek	0	1	49	1:1	0.411	1.199	0.493	-
1 905	26590	QPSK	F	20	18.0	17.09	-0.05	Right Cheek	0	50	49	1:1	0.390	1.233	0.481	-
1 905	26590	QPSK	F	20	18.0	17.21	-0.01	Right Tilt	0	1	49	1:1	0.441	1.199	0.529	A8
1 905	26590	QPSK	F	20	18.0	17.09	-0.01	Right Tilt	0	50	49	1:1	0.423	1.233	0.522	-
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 26 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	25.5	24.98	0.19	Left Cheek	0	1	0	1:1	0.103	1.127	0.116	-
831.5	26865	QPSK	A	15	24.5	23.99	-0.06	Left Cheek	1	36	0	1:1	0.074	1.125	0.083	-
831.5	26865	QPSK	A	15	25.5	24.98	0.11	Left Tilt	0	1	0	1:1	0.057	1.127	0.064	-
831.5	26865	QPSK	A	15	24.5	23.99	0.17	Left Tilt	1	36	0	1:1	0.044	1.125	0.050	-
831.5	26865	QPSK	A	15	25.5	24.98	0.07	Right Cheek	0	1	0	1:1	0.142	1.127	0.160	A9
831.5	26865	QPSK	A	15	24.5	23.99	0.14	Right Cheek	1	36	0	1:1	0.116	1.125	0.131	-
831.5	26865	QPSK	A	15	25.5	24.98	0.14	Right Tilt	0	1	0	1:1	0.068	1.127	0.077	-
831.5	26865	QPSK	A	15	24.5	23.99	0.16	Right Tilt	1	36	0	1:1	0.055	1.125	0.062	-
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 41 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 549.5	40185	QPSK	B	20	25.0	24.12	-0.17	Left Cheek	0	1	0	1:1.58	0.081	1.225	0.099	A10
2 549.5	40185	QPSK	B	20	24.0	23.18	0.00	Left Cheek	1	50	0	1:1.58	0.063	1.208	0.076	-
2 549.5	40185	QPSK	B	20	25.0	24.12	0.18	Left Tilt	0	1	0	1:1.58	0.027	1.225	0.033	-
2 549.5	40185	QPSK	B	20	24.0	23.18	0.17	Left Tilt	1	50	0	1:1.58	0.020	1.208	0.024	-
2 549.5	40185	QPSK	B	20	25.0	24.12	-0.12	Right Cheek	0	1	0	1:1.58	0.077	1.225	0.094	-
2 549.5	40185	QPSK	B	20	24.0	23.18	0.00	Right Cheek	1	50	0	1:1.58	0.061	1.208	0.074	-
2 549.5	40185	QPSK	B	20	25.0	24.12	0.15	Right Tilt	0	1	0	1:1.58	0.061	1.225	0.075	-
2 549.5	40185	QPSK	B	20	24.0	23.18	0.06	Right Tilt	1	50	0	1:1.58	0.050	1.208	0.060	-
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																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 770	132572	QPSK	B	20	25.0	23.76	-0.14	Left Cheek	0	1	0	1:1	0.145	1.330	0.193	-
1 770	132572	QPSK	B	20	24.0	22.60	0.12	Left Cheek	1	50	0	1:1	0.115	1.380	0.159	-
1 770	132572	QPSK	B	20	25.0	23.76	-0.06	Left Tilt	0	1	0	1:1	0.099	1.330	0.132	-
1 770	132572	QPSK	B	20	24.0	22.60	-0.01	Left Tilt	1	50	0	1:1	0.079	1.380	0.109	-
1 770	132572	QPSK	B	20	25.0	23.76	-0.10	Right Cheek	0	1	0	1:1	0.159	1.330	0.211	-
1 770	132572	QPSK	B	20	24.0	22.60	-0.19	Right Cheek	1	50	0	1:1	0.115	1.380	0.159	-
1 770	132572	QPSK	B	20	25.0	23.76	-0.01	Right Tilt	0	1	0	1:1	0.107	1.330	0.142	-
1 770	132572	QPSK	B	20	24.0	22.60	-0.07	Right Tilt	1	50	0	1:1	0.076	1.380	0.105	-
1 745	132322	QPSK	F	20	18.0	17.23	0.10	Left Cheek	0	1	49	1:1	0.337	1.194	0.402	-
1 745	132322	QPSK	F	20	18.0	17.18	-0.02	Left Cheek	0	50	49	1:1	0.338	1.208	0.408	-
1 745	132322	QPSK	F	20	18.0	17.23	-0.03	Left Tilt	0	1	49	1:1	0.368	1.194	0.439	-
1 745	132322	QPSK	F	20	18.0	17.18	0.00	Left Tilt	0	50	49	1:1	0.364	1.208	0.440	-
1 745	132322	QPSK	F	20	18.0	17.23	-0.02	Right Cheek	0	1	49	1:1	0.532	1.194	0.635	-
1 745	132322	QPSK	F	20	18.0	17.18	-0.03	Right Cheek	0	50	49	1:1	0.521	1.208	0.629	-
1 745	132322	QPSK	F	20	18.0	17.23	-0.13	Right Tilt	0	1	49	1:1	0.560	1.194	0.669	-
1 745	132322	QPSK	F	20	18.0	17.18	-0.01	Right Tilt	0	50	49	1:1	0.567	1.208	0.685	A11
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 n5 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	25.5	24.84	0.18	Left Cheek	0	1	104	1:1	0.081	1.164	0.094	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.77	0.07	Left Cheek	0	50	28	1:1	0.077	1.183	0.091	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.84	0.05	Left Tilt	0	1	104	1:1	0.053	1.164	0.062	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.77	0.01	Left Tilt	0	50	28	1:1	0.050	1.183	0.059	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.84	0.18	Right Cheek	0	1	104	1:1	0.113	1.164	0.132	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.77	0.08	Right Cheek	0	50	28	1:1	0.114	1.183	0.135	A12
836.5	167300	DFT-s QPSK	A	20	25.5	24.84	-0.17	Right Tilt	0	1	104	1:1	0.062	1.164	0.072	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.77	0.11	Right Tilt	0	50	28	1:1	0.065	1.183	0.077	-
836.5	167300	CP QPSK	A	20	24.0	23.10	0.19	Right Cheek	1.5	1	1	1:1	0.078	1.230	0.096	-
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																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.00	Left Cheek	0	1	137	1:1	0.039	1.186	0.046	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.00	Left Cheek	0	135	69	1:1	0.038	1.167	0.044	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.00	Left Tilt	0	1	137	1:1	0.004 03	1.186	0.005	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.07	Left Tilt	0	135	69	1:1	0.004 41	1.167	0.005	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.00	Right Cheek	0	1	137	1:1	0.019	1.186	0.023	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.10	Right Cheek	0	135	69	1:1	0.008 12	1.167	0.009	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.00	Right Tilt	0	1	137	1:1	0.008 29	1.186	0.010	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	-0.10	Right Tilt	0	135	69	1:1	0.006 96	1.167	0.008	-
2 592.99	518598	CP QPSK	B	100	18.5	17.31	0.00	Left Cheek	0	1	1	1:1	0.025	1.315	0.033	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	-0.08	Left Cheek	0	1	137	1:1	0.286	1.250	0.358	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.16	Left Tilt	0	1	137	1:1	0.276	1.250	0.345	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	-0.13	Right Cheek	0	1	137	1:1	0.474	1.250	0.593	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.13	Right Tilt	0	1	137	1:1	0.527	1.250	0.659	A13
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	-0.15	Left Cheek	0	1	137	1:1	0.162	1.271	0.206	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	0.13	Left Tilt	0	1	137	1:1	0.128	1.271	0.163	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	-0.10	Right Cheek	0	1	137	1:1	0.474	1.271	0.602	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	0.17	Right Tilt	0	1	137	1:1	0.274	1.271	0.348	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.16	Left Cheek	0	1	137	1:1	0.142	1.172	0.166	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	-0.17	Left Tilt	0	1	137	1:1	0.106	1.172	0.124	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.14	Right Cheek	0	1	137	1:1	0.021	1.172	0.024	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	-0.09	Right Tilt	0	1	137	1:1	0.026	1.172	0.030	-
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 n66 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	B	40	25.0	24.46	-0.01	Left Cheek	0	1	214	1:1	0.103	1.132	0.117	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.29	-0.03	Left Cheek	0	108	54	1:1	0.091	1.178	0.107	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.46	-0.06	Left Tilt	0	1	214	1:1	0.074	1.132	0.084	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.29	0.03	Left Tilt	0	108	54	1:1	0.052	1.178	0.061	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.46	-0.01	Right Cheek	0	1	214	1:1	0.104	1.132	0.118	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.29	0.00	Right Cheek	0	108	54	1:1	0.103	1.178	0.121	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.46	0.05	Right Tilt	0	1	214	1:1	0.074	1.132	0.084	-
1 745	349000	DFT-s QPSK	B	40	25.0	24.29	-0.15	Right Tilt	0	108	54	1:1	0.063	1.178	0.074	-
1 745	349000	CP QPSK	B	40	23.5	22.54	-0.01	Right Cheek	1.5	1	1	1:1	0.060	1.247	0.075	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.01	Left Cheek	0	1	214	1:1	0.353	1.183	0.418	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.02	Left Cheek	0	108	108	1:1	0.360	1.194	0.430	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	0.00	Left Tilt	0	1	214	1:1	0.357	1.183	0.422	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.04	Left Tilt	0	108	108	1:1	0.367	1.194	0.438	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.04	Right Cheek	0	1	214	1:1	0.570	1.183	0.674	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	0.01	Right Cheek	0	108	108	1:1	0.555	1.194	0.663	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	0.01	Right Tilt	0	1	214	1:1	0.542	1.183	0.641	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.05	Right Tilt	0	108	108	1:1	0.574	1.194	0.685	A14
1 745	349000	CP QPSK	F	40	18.0	16.71	-0.04	Right Tilt	0	1	1	1:1	0.474	1.346	0.638	-
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 77 Head SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	15.0	14.11	0.14	Left Cheek	0	1	271	1:1	0.080	1.227	0.098	-
3 750	650000	DFT-s QPSK	G	100	15.0	13.96	-0.12	Left Cheek	0	135	138	1:1	0.083	1.271	0.105	-
3 750	650000	DFT-s QPSK	G	100	15.0	14.11	0.06	Left Tilt	0	1	271	1:1	0.065	1.227	0.080	-
3 750	650000	DFT-s QPSK	G	100	15.0	13.96	-0.08	Left Tilt	0	135	138	1:1	0.073	1.271	0.093	-
3 750	650000	DFT-s QPSK	G	100	15.0	14.11	-0.19	Right Cheek	0	1	271	1:1	0.350	1.227	0.429	-
3 930	662000	DFT-s QPSK	G	100	15.0	13.85	-0.19	Right Cheek	0	1	271	1:1	0.299	1.303	0.390	-
3 750	650000	DFT-s QPSK	G	100	15.0	13.96	-0.13	Right Cheek	0	135	138	1:1	0.372	1.271	0.473	-
3 930	662000	DFT-s QPSK	G	100	15.0	13.74	-0.10	Right Cheek	0	135	69	1:1	0.333	1.337	0.445	-
3 750	650000	DFT-s QPSK	G	100	15.0	14.11	0.11	Right Tilt	0	1	271	1:1	0.199	1.227	0.244	-
3 750	650000	DFT-s QPSK	G	100	15.0	13.96	0.17	Right Tilt	0	135	138	1:1	0.199	1.271	0.253	-
3 750	650000	CP QPSK	G	100	15.0	14.05	-0.18	Right Cheek	0	1	1	1:1	0.384	1.245	0.478	-
3 500.01	633334	DFT-s QPSK	G	100	15.0	13.87	0.17	Right Cheek	0	1	137	1:1	0.396	1.297	0.514	-
3 500.01	633334	DFT-s QPSK	G	100	15.0	13.85	-0.15	Right Cheek	0	135	69	1:1	0.434	1.303	0.566	A15
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

DTS Head SAR															
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 437	6	802.11b	H	20	1	14.0	13.60	0.07	Left Cheek	98.9	0.091	1.096	1.011	0.101	-
2 437	6	802.11b	H	20	1	14.0	13.60	0.08	Left Tilt	98.9	0.062	1.096	1.011	0.069	-
2 437	6	802.11b	H	20	1	14.0	13.60	0.06	Right Cheek	98.9	0.384	1.096	1.011	0.426	A16
2 437	6	802.11b	H	20	1	14.0	13.60	0.08	Right Tilt	98.9	0.133	1.096	1.011	0.147	-
2 437	6	802.11b	H+J	20	1	17.0	16.59	-0.03	Left Cheek	98.9	0.145	1.107	1.011	0.162	-
2 437	6	802.11b	H+J	20	1	17.0	16.59	0.10	Left Tilt	98.9	0.067	1.107	1.011	0.075	-
2 437	6	802.11b	H+J	20	1	17.0	16.59	0.19	Right Cheek	98.9	0.373	1.107	1.011	0.418	-
2 437	6	802.11b	H+J	20	1	17.0	16.59	0.18	Right Tilt	98.9	0.133	1.107	1.011	0.149	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII2A Head SAR															
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 290	58	802.11ac	G	80	MCS0	9.0	8.98	0.00	Left Cheek	86.0	0.000	1.005	1.163	0.000	-
5 290	58	802.11ac	G	80	MCS0	9.0	8.98	0.06	Left Tilt	86.0	0.015	1.005	1.163	0.018	-
5 290	58	802.11ac	G	80	MCS0	9.0	8.98	0.13	Right Cheek	86.0	0.093	1.005	1.163	0.109	-
5 290	58	802.11ac	G	80	MCS0	9.0	8.98	0.04	Right Tilt	86.0	0.054	1.005	1.163	0.063	-
5 290	58	802.11ac	G+I	80	MCS0	12.0	11.38	-0.18	Left Cheek	86.0	0.000 78	1.358	1.163	0.001	-
5 290	58	802.11ac	G+I	80	MCS0	12.0	11.38	-0.14	Left Tilt	86.0	0.014	1.358	1.163	0.022	-
5 290	58	802.11ac	G+I	80	MCS0	12.0	11.38	-0.10	Right Cheek	86.0	0.144	1.358	1.163	0.227	-
5 290	58	802.11ac	G+I	80	MCS0	12.0	11.38	-0.10	Right Tilt	86.0	0.048	1.358	1.163	0.076	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII2C Head SAR															
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 690	138	802.11ac	G	80	MCS0	9.0	8.96	0.00	Left Cheek	86.0	0.042	1.009	1.163	0.049	-
5 690	138	802.11ac	G	80	MCS0	9.0	8.96	0.00	Left Tilt	86.0	0.048	1.009	1.163	0.056	-
5 690	138	802.11ac	G	80	MCS0	9.0	8.96	0.02	Right Cheek	86.0	0.109	1.009	1.163	0.128	-
5 690	138	802.11ac	G	80	MCS0	9.0	8.96	0.10	Right Tilt	86.0	0.102	1.009	1.163	0.120	-
5 690	138	802.11ac	G+I	80	MCS0	12.0	11.34	0.00	Left Cheek	86.0	0.020	1.377	1.163	0.032	-
5 690	138	802.11ac	G+I	80	MCS0	12.0	11.34	0.10	Left Tilt	86.0	0.023	1.377	1.163	0.037	-
5 690	138	802.11ac	G+I	80	MCS0	12.0	11.34	0.02	Right Cheek	86.0	0.158	1.377	1.163	0.253	-
5 690	138	802.11ac	G+I	80	MCS0	12.0	11.34	-0.16	Right Tilt	86.0	0.067	1.377	1.163	0.107	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII3 Head SAR															
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 775	155	802.11ac	G	80	MCS0	9.0	8.98	0.01	Left Cheek	86.0	0.022	1.005	1.163	0.026	-
5 775	155	802.11ac	G	80	MCS0	9.0	8.98	0.00	Left Tilt	86.0	0.023	1.005	1.163	0.027	-
5 775	155	802.11ac	G	80	MCS0	9.0	8.98	0.00	Right Cheek	86.0	0.100	1.005	1.163	0.117	-
5 775	155	802.11ac	G	80	MCS0	9.0	8.98	0.00	Right Tilt	86.0	0.103	1.005	1.163	0.120	-
5 775	155	802.11ac	G+I	80	MCS0	12.0	11.54	0.00	Left Cheek	86.0	0.000	1.247	1.163	0.000	-
5 775	155	802.11ac	G+I	80	MCS0	12.0	11.54	0.00	Left Tilt	86.0	0.000 143	1.247	1.163	0.000	-
5 775	155	802.11ac	G+I	80	MCS0	12.0	11.54	0.00	Right Cheek	86.0	0.167	1.247	1.163	0.242	-
5 775	155	802.11ac	G+I	80	MCS0	12.0	11.54	0.00	Right Tilt	86.0	0.040	1.247	1.163	0.058	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII4 Head SAR															
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5855	171	802.11ac	G	80	MCS0	9.0	8.95	0.00	Left Cheek	86.0	0.000	1.012	1.163	0.000	-
5855	171	802.11ac	G	80	MCS0	9.0	8.95	0.00	Left Tilt	86.0	0.020	1.012	1.163	0.024	-
5855	171	802.11ac	G	80	MCS0	9.0	8.95	0.00	Right Cheek	86.0	0.069	1.012	1.163	0.081	-
5855	171	802.11ac	G	80	MCS0	9.0	8.95	0.00	Right Tilt	86.0	0.024	1.012	1.163	0.028	-
5855	171	802.11ac	G+I	80	MCS0	12.0	11.79	0.00	Left Cheek	86.0	0.000	1.094	1.163	0.000	-
5855	171	802.11ac	G+I	80	MCS0	12.0	11.79	0.02	Left Tilt	86.0	0.00776	1.094	1.163	0.010	-
5855	171	802.11ac	G+I	80	MCS0	12.0	11.79	0.00	Right Cheek	86.0	0.179	1.094	1.163	0.228	A17
5855	171	802.11ac	G+I	80	MCS0	12.0	11.79	0.01	Right Tilt	86.0	0.023	1.094	1.163	0.029	-
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														
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No	
2 480	78	2-DH5	H	20	12.0	11.99	-0.04	Left Cheek	0.104	1.002	1.009	0.105	-	
2 480	78	2-DH5	H	20	12.0	11.99	0.10	Left Tilt	0.071	1.002	1.009	0.072	-	
2 480	78	2-DH5	H	20	12.0	11.99	0.09	Right Cheek	0.316	1.002	1.009	0.319	A18	
2 480	78	2-DH5	H	20	12.0	11.99	0.11	Right Tilt	0.157	1.002	1.009	0.159	-	
2 440	17	LE 125K(255)	H	20	12.0	10.87	-0.10	Left Cheek	0.051	1.297	1.009	0.067	-	
2 440	17	LE 125K(255)	H	20	12.0	10.87	0.14	Left Tilt	0.048	1.297	1.009	0.063	-	
2 440	17	LE 125K(255)	H	20	12.0	10.87	0.14	Right Cheek	0.203	1.297	1.009	0.266	-	
2 440	17	LE 125K(255)	H	20	12.0	10.87	0.04	Right Tilt	0.099	1.297	1.009	0.130	-	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram						

13.1.2 Bodyworn SAR Measurement Results

GSM 850 BodyWorn SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GSM Voice	A	31.7	30.28	0.14	Rear	1:8.3	5	0.672	1.387	0.932	-
824.2	128	GSM Voice	A	31.7	30.24	-0.03	Rear	1:8.3	5	0.691	1.400	0.967	B1
848.6	251	GSM Voice	A	31.7	30.26	-0.04	Rear	1:8.3	5	0.656	1.393	0.914	-
836.6	190	GSM Voice	A	31.7	30.28	-0.03	Front	1:8.3	5	0.341	1.387	0.473	-
836.6	190	GPRS 4Tx	A	25.7	23.81	-0.15	Rear	1:2.07	5	0.428	1.545	0.661	-
836.6	190	GPRS 4Tx	A	25.7	23.81	-0.10	Front	1:2.07	5	0.236	1.545	0.365	-
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

GSM 1900 BodyWorn SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GPRS 4Tx	B	22.2	20.67	0.10	Rear	1:2.07	5	0.292	1.422	0.415	-
1 880	661	GPRS 4Tx	B	22.2	20.67	0.06	Front	1:2.07	5	0.170	1.422	0.242	-
1 880	661	GSM Voice	B	28.2	26.71	0.10	Rear	1:8.3	5	0.328	1.409	0.462	B2
1 880	661	GSM Voice	B	28.2	26.71	-0.19	Front	1:8.3	5	0.170	1.409	0.240	-
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

UMTS BAND 2 BodyWorn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	B	19.0	17.03	0.03	Rear	5	0.369	1.574	0.581	B3
1 880	9400	RMC	B	19.0	17.03	-0.05	Front	5	0.161	1.574	0.253	-
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 BodyWorn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	B	20.0	18.61	0.04	Rear	5	0.236	1.377	0.325	B4
1 732.4	1412	RMC	B	20.0	18.61	-0.16	Front	5	0.146	1.377	0.201	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS BAND 5 BodyWorn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	22.5	21.03	-0.04	Rear	5	0.512	1.403	0.718	B5
836.6	4183	RMC	A	22.5	21.03	0.15	Front	5	0.367	1.403	0.515	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	23.0	22.36	-0.01	Rear	0	1	0	1:1	5	0.372	1.159	0.431	-
707.5	23095	QPSK	A	10	23.0	22.20	-0.03	Rear	0	25	0	1:1	5	0.375	1.202	0.451	B6
707.5	23095	QPSK	A	10	23.0	22.36	0.13	Front	0	1	0	1:1	5	0.220	1.159	0.255	
707.5	23095	QPSK	A	10	23.0	22.20	0.06	Front	0	25	0	1:1	5	0.220	1.202	0.264	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	24.5	23.23	0.16	Rear	0	1	24	1:1	5	0.627	1.340	0.840	B7
782	23230	QPSK	A	10	24.0	22.80	0.07	Rear	0.5	25	24	1:1	5	0.578	1.318	0.762	-
782	23230	QPSK	A	10	24.0	22.80	0.00	Rear	0.5	50	0	1:1	5	0.577	1.318	0.760	
782	23230	QPSK	A	10	24.5	23.23	-0.13	Front	0	1	24	1:1	5	0.386	1.340	0.517	
782	23230	QPSK	A	10	24.0	22.80	0.03	Front	0.5	25	24	1:1	5	0.321	1.318	0.423	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 905	26590	QPSK	B	20	19.0	17.49	-0.18	Rear	0	1	49	1:1	5	0.506	1.416	0.716	-
1 905	26590	QPSK	B	20	19.0	17.40	0.02	Rear	0	50	49	1:1	5	0.481	1.445	0.695	-
1 905	26590	QPSK	B	20	19.0	17.49	-0.03	Front	0	1	49	1:1	5	0.270	1.416	0.382	-
1 905	26590	QPSK	B	20	19.0	17.40	0.16	Front	0	50	49	1:1	5	0.256	1.445	0.370	-
1 905	26590	QPSK	F	20	19.0	17.66	0.06	Rear	0	1	49	1:1	5	0.515	1.361	0.701	B8
1 905	26590	QPSK	F	20	19.0	17.56	-0.03	Rear	0	50	49	1:1	5	0.489	1.393	0.681	-
1 905	26590	QPSK	F	20	19.0	17.66	-0.07	Front	0	1	49	1:1	5	0.289	1.361	0.393	-
1 905	26590	QPSK	F	20	19.0	17.56	-0.03	Front	0	50	49	1:1	5	0.273	1.393	0.380	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	22.5	21.25	-0.11	Rear	0	1	0	1:1	5	0.574	1.334	0.766	-
831.5	26865	QPSK	A	15	22.5	21.19	0.05	Rear	0	36	0	1:1	5	0.585	1.352	0.791	B9
831.5	26865	QPSK	A	15	22.5	21.25	0.06	Front	0	1	0	1:1	5	0.346	1.334	0.462	-
831.5	26865	QPSK	A	15	22.5	21.19	0.04	Front	0	36	0	1:1	5	0.360	1.352	0.487	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 549.5	40185	QPSK	B	20	20.5	19.43	-0.16	Rear	0	1	0	1:1.58	5	0.589	1.279	0.753	-
2 506	39750	QPSK	B	20	20.5	19.30	0.12	Rear	0	1	0	1:1.58	5	0.634	1.318	0.836	-
2 593	40620	QPSK	B	20	20.5	19.23	0.17	Rear	0	1	0	1:1.58	5	0.568	1.340	0.761	-
2 636.5	41055	QPSK	B	20	20.5	19.17	0.14	Rear	0	1	0	1:1.58	5	0.519	1.358	0.705	-
2 680	41490	QPSK	B	20	20.5	19.16	0.16	Rear	0	1	0	1:1.58	5	0.377	1.361	0.513	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.10	Rear	0	50	0	1:1.58	5	0.633	1.279	0.810	-
2 506	39750	QPSK	B	20	20.5	19.29	0.10	Rear	0	50	0	1:1.58	5	0.647	1.321	0.855	-
2 593	40620	QPSK	B	20	20.5	19.17	0.12	Rear	0	50	0	1:1.58	5	0.608	1.358	0.826	-
2 636.5	41055	QPSK	B	20	20.5	19.14	0.14	Rear	0	50	0	1:1.58	5	0.567	1.368	0.776	-
2 680	41490	QPSK	B	20	20.5	19.13	0.10	Rear	0	50	0	1:1.58	5	0.470	1.371	0.644	-
2 549.5	40185	QPSK	B	20	20.5	19.40	0.11	Rear	0	100	0	1:1.58	5	0.662	1.288	0.853	B10
2 549.5	40185	QPSK	B	20	20.5	19.43	0.08	Front	0	1	0	1:1.58	5	0.322	1.279	0.412	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.09	Front	0	50	0	1:1.58	5	0.326	1.279	0.417	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	132322	QPSK	B	20	19.0	17.92	-0.18	Rear	0	1	0	1:1	5	0.347	1.282	0.445	-
1 745	132322	QPSK	B	20	19.0	17.76	-0.17	Rear	0	50	0	1:1	5	0.334	1.330	0.444	-
1 745	132322	QPSK	B	20	19.0	17.92	-0.07	Front	0	1	0	1:1	5	0.277	1.282	0.355	-
1 745	132322	QPSK	B	20	19.0	17.76	-0.14	Front	0	50	0	1:1	5	0.247	1.330	0.329	-
1 745	132322	QPSK	F	20	18.0	17.23	0.00	Rear	0	1	49	1:1	5	0.509	1.194	0.608	-
1 745	132322	QPSK	F	20	18.0	17.18	0.04	Rear	0	50	49	1:1	5	0.512	1.208	0.618	B11
1 745	132322	QPSK	F	20	18.0	17.23	-0.06	Front	0	1	49	1:1	5	0.230	1.194	0.275	-
1 745	132322	QPSK	F	20	18.0	17.18	0.02	Front	0	50	49	1:1	5	0.237	1.208	0.286	-
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 n5 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.16	Rear	0	1	104	1:1	5	0.552	1.337	0.738	B12
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	-0.13	Rear	0	50	56	1:1	5	0.535	1.346	0.720	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.18	Front	0	1	104	1:1	5	0.360	1.337	0.481	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	0.08	Front	0	50	56	1:1	5	0.332	1.346	0.447	-
836.5	167300	CP QPSK	A	20	22.5	21.03	-0.14	Rear	0	1	1	1:1	5	0.476	1.403	0.668	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.17	Rear	0	1	137	1:1	5	0.769	1.186	0.912	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.15	Rear	0	135	69	1:1	5	0.777	1.167	0.907	B13
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.81	0.02	Rear	0	270	0	1:1	5	0.766	1.172	0.898	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.17	Front	0	1	137	1:1	5	0.387	1.186	0.459	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.08	Front	0	135	69	1:1	5	0.414	1.167	0.483	-
2 592.99	518598	CP QPSK	B	100	18.5	17.31	-0.13	Rear	0	1	1	1:1	5	0.632	1.315	0.831	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.12	Rear	0	1	137	1:1	5	0.349	1.250	0.436	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.02	Front	0	1	137	1:1	5	0.268	1.250	0.335	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	0.15	Rear	0	1	137	1:1	5	0.449	1.271	0.571	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	-0.01	Front	0	1	137	1:1	5	0.285	1.271	0.362	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.00	Rear	0	1	137	1:1	5	0.200	1.172	0.234	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.00	Front	0	1	137	1:1	5	0.065	1.172	0.076	-
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 BodyWorn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	0.07	Rear	0	1	214	1:1	5	0.354	1.315	0.466	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	-0.04	Rear	0	108	108	1:1	5	0.347	1.337	0.464	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	-0.14	Front	0	1	214	1:1	5	0.207	1.315	0.272	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	-0.03	Front	0	108	108	1:1	5	0.183	1.337	0.245	-
1 745	349000	CP QPSK	B	40	19.0	17.52	-0.02	Rear	0	1	1	1:1	5	0.255	1.406	0.359	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.09	Rear	0	1	214	1:1	5	0.393	1.183	0.465	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	0.02	Rear	0	108	108	1:1	5	0.402	1.194	0.480	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.13	Front	0	1	214	1:1	5	0.276	1.183	0.327	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.02	Front	0	108	108	1:1	5	0.282	1.194	0.337	-
1 745	349000	CP QPSK	F	40	18.0	16.71	-0.06	Rear	0	1	1	1:1	5	0.461	1.346	0.621	B14
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 Bodyworn SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	-0.15	Rear	0	1	271	1:1	5	0.377	1.245	0.469	-
3 930	662000	DFT-s QPSK	G	100	16.0	14.94	0.16	Rear	0	1	271	1:1	5	0.314	1.276	0.401	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.03	Rear	0	135	138	1:1	5	0.376	1.279	0.481	-
3 930	662000	DFT-s QPSK	G	100	16.0	14.85	0.07	Rear	0	135	69	1:1	5	0.321	1.303	0.418	-
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	0.19	Front	0	1	271	1:1	5	0.189	1.245	0.235	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.15	Front	0	135	138	1:1	5	0.168	1.279	0.215	-
3 750	650000	CP QPSK	G	100	16.0	15.04	0.15	Rear	0	1	1	1:1	5	0.407	1.247	0.508	B15
3 500.01	633334	DFT-s QPSK	G	100	16.0	14.89	0.16	Rear	0	1	137	1:1	5	0.368	1.291	0.475	-
3 500.01	633334	DFT-s QPSK	G	100	16.0	14.89	0.18	Rear	0	135	69	1:1	5	0.350	1.291	0.452	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

DTS BodyWorn SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 437	6	802.11b	H	20	1	15.0	14.83	0.17	Rear	98.9	5	0.511	1.040	1.011	0.537	B16
2 437	6	802.11b	H	20	1	15.0	14.83	0.12	Front	98.9	5	0.310	1.040	1.011	0.326	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	0.14	Rear	98.9	5	0.341	1.040	1.011	0.359	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	0.16	Front	98.9	5	0.208	1.040	1.011	0.219	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2A BodyWorn SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5270	54	802.11n	G	40	MCS0	12.0	11.98	0.02	Rear	85.9	0	0.119	1.005	1.164	0.139	-
5270	54	802.11n	G	40	MCS0	12.0	11.98	0.00	Front	85.9	0	0.054	1.005	1.164	0.063	-
5270	54	802.11n	G+I	40	MCS8	15.0	14.32	0.00	Rear	85.9	0	0.245	1.374	1.164	0.392	B17
5270	54	802.11n	G+I	40	MCS8	15.0	14.32	0.00	Front	85.9	0	0.108	1.374	1.164	0.173	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2C BodyWorn SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 690	138	802.11ac	G	80	MCS0	12.0	11.83	0.00	Rear	86.0	0	0.192	1.040	1.163	0.232	-
5 690	138	802.11ac	G	80	MCS0	12.0	11.83	0.00	Front	86.0	0	0.090	1.040	1.163	0.109	-
5 690	138	802.11ac	G+I	80	MCS0	15.0	14.11	-0.02	Rear	86.0	0	0.201	1.503	1.163	0.351	-
5 690	138	802.11ac	G+I	80	MCS0	15.0	14.11	0.00	Front	86.0	0	0.088	1.503	1.163	0.154	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII3 BodyWorn SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.00	Rear	86.0	5	0.158	1.148	1.163	0.211	-
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.00	Front	86.0	5	0.070	1.148	1.163	0.093	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	0.00	Rear	86.0	5	0.123	1.104	1.163	0.158	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	0.00	Front	86.0	5	0.094	1.104	1.163	0.121	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII4 BodyWorn SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 855	171	802.11ac	G	80	MCS0	12.0	11.55	0.00	Rear	86.0	0	0.109	1.109	1.163	0.141	-
5 855	171	802.11ac	G	80	MCS0	12.0	11.55	0.00	Front	86.0	0	0.053	1.109	1.163	0.068	-
5 855	171	802.11ac	G+I	80	MCS0	15.0	14.27	0.00	Rear	86.0	0	0.107	1.268	1.163	0.158	-
5 855	171	802.11ac	G+I	80	MCS0	15.0	14.27	0.00	Front	86.0	0	0.147	1.268	1.163	0.217	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

DSS BodyWorn SAR														
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 402	0	DH5	H	20	14.0	13.87	-0.14	Rear	5	0.350	1.030	1.009	0.364	B18
2 402	0	DH5	H	20	14.0	13.87	0.12	Front	5	0.221	1.030	1.009	0.230	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	-0.05	Rear	5	0.266	1.054	1.009	0.283	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	-0.16	Front	5	0.235	1.054	1.009	0.250	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

13.1.3 Hotspot SAR Measurement Results

GSM 850 Hotspot SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GPRS 4Tx	A	25.7	23.81	-0.15	Rear	1:2.07	5	0.428	1.545	0.661	C1
836.6	190	GPRS 4Tx	A	25.7	23.81	-0.10	Front	1:2.07	5	0.236	1.545	0.365	-
836.6	190	GPRS 4Tx	A	25.7	23.81	-0.05	Right	1:2.07	10	0.106	1.545	0.164	-
836.6	190	GPRS 4Tx	A	25.7	23.81	0.17	Bottom	1:2.07	10	0.181	1.545	0.280	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

GSM 1900 Hotspot SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GPRS 4Tx	B	22.2	20.67	0.10	Rear	1:2.07	5	0.292	1.422	0.415	C2
1 880	661	GPRS 4Tx	B	22.2	20.67	0.06	Front	1:2.07	5	0.170	1.422	0.242	-
1 880	661	GPRS 4Tx	B	22.2	20.67	0.15	Left	1:2.07	10	0.043	1.422	0.061	-
1 880	661	GPRS 4Tx	B	22.2	20.67	0.00	Bottom	1:2.07	10	0.197	1.422	0.280	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 2 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	B	19.0	17.03	0.03	Rear	5	0.369	1.574	0.581	C3
1 880	9400	RMC	B	19.0	17.03	-0.05	Front	5	0.161	1.574	0.253	-
1 880	9400	RMC	B	19.0	17.03	-0.04	Left	10	0.065	1.574	0.102	-
1 880	9400	RMC	B	19.0	17.03	0.08	Bottom	10	0.227	1.574	0.357	-
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 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	B	20.0	18.61	0.04	Rear	5	0.236	1.377	0.325	C4
1 732.4	1412	RMC	B	20.0	18.61	-0.16	Front	5	0.146	1.377	0.201	-
1 732.4	1412	RMC	B	20.0	18.61	-0.06	Left	10	0.039	1.377	0.054	-
1 732.4	1412	RMC	B	20.0	18.61	0.01	Bottom	10	0.156	1.377	0.215	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS Band 5 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	22.5	21.03	-0.04	Rear	5	0.512	1.403	0.718	C5
836.6	4183	RMC	A	22.5	21.03	0.15	Front	5	0.367	1.403	0.515	-
836.6	4183	RMC	A	22.5	21.03	0.05	Right	10	0.127	1.403	0.178	-
836.6	4183	RMC	A	22.5	21.03	0.06	Bottom	10	0.217	1.403	0.304	-
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	23.0	22.36	-0.01	Rear	0	1	0	1:1	5	0.372	1.159	0.431	-
707.5	23095	QPSK	A	10	23.0	22.20	-0.03	Rear	0	25	0	1:1	5	0.375	1.202	0.451	C6
707.5	23095	QPSK	A	10	23.0	22.36	0.13	Front	0	1	0	1:1	5	0.220	1.159	0.255	
707.5	23095	QPSK	A	10	23.0	22.20	0.06	Front	0	25	0	1:1	5	0.220	1.202	0.264	-
707.5	23095	QPSK	A	10	23.0	22.36	0.02	Right	0	1	0	1:1	10	0.156	1.159	0.181	-
707.5	23095	QPSK	A	10	23.0	22.20	-0.08	Right	0	25	0	1:1	10	0.149	1.202	0.179	-
707.5	23095	QPSK	A	10	23.0	22.36	0.00	Bottom	0	1	0	1:1	10	0.154	1.159	0.178	-
707.5	23095	QPSK	A	10	23.0	22.20	0.07	Bottom	0	25	0	1:1	10	0.156	1.202	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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	24.5	23.23	0.16	Rear	0	1	24	1:1	5	0.627	1.340	0.840	C7
782	23230	QPSK	A	10	24.0	22.80	0.07	Rear	0.5	25	24	1:1	5	0.578	1.318	0.762	-
782	23230	QPSK	A	10	24.0	22.80	0.00	Rear	0.5	50	0	1:1	5	0.577	1.318	0.760	
782	23230	QPSK	A	10	24.5	23.23	-0.13	Front	0	1	24	1:1	5	0.386	1.340	0.517	
782	23230	QPSK	A	10	24.0	22.80	0.03	Front	0.5	25	24	1:1	5	0.321	1.318	0.423	-
782	23230	QPSK	A	10	24.5	23.23	-0.04	Right	0	1	24	1:1	10	0.291	1.340	0.390	-
782	23230	QPSK	A	10	24.0	22.80	-0.01	Right	0.5	25	24	1:1	10	0.229	1.318	0.302	-
782	23230	QPSK	A	10	24.5	23.23	0.11	Bottom	0	1	24	1:1	10	0.273	1.340	0.366	-
782	23230	QPSK	A	10	24.0	22.80	0.06	Bottom	0.5	25	24	1:1	10	0.216	1.318	0.285	-
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 905	26590	QPSK	B	20	19.0	17.49	-0.18	Rear	0	1	49	1:1	5	0.506	1.416	0.716	-
1 905	26590	QPSK	B	20	19.0	17.40	0.02	Rear	0	50	49	1:1	5	0.481	1.445	0.695	-
1 905	26590	QPSK	B	20	19.0	17.49	-0.03	Front	0	1	49	1:1	5	0.270	1.416	0.382	-
1 905	26590	QPSK	B	20	19.0	17.40	0.16	Front	0	50	49	1:1	5	0.256	1.445	0.370	-
1 905	26590	QPSK	B	20	19.0	17.49	0.17	Left	0	1	49	1:1	10	0.084	1.416	0.119	-
1 905	26590	QPSK	B	20	19.0	17.40	0.13	Left	0	50	49	1:1	10	0.081	1.445	0.117	-
1 905	26590	QPSK	B	20	19.0	17.49	-0.01	Bottom	0	1	49	1:1	10	0.282	1.416	0.399	-
1 905	26590	QPSK	B	20	19.0	17.40	0.00	Bottom	0	50	49	1:1	10	0.268	1.445	0.387	-
1 905	26590	QPSK	F	20	19.0	17.66	0.06	Rear	0	1	49	1:1	5	0.515	1.361	0.701	C8
1 905	26590	QPSK	F	20	19.0	17.56	-0.03	Rear	0	50	49	1:1	5	0.489	1.393	0.681	-
1 905	26590	QPSK	F	20	19.0	17.66	-0.07	Front	0	1	49	1:1	5	0.289	1.361	0.393	-
1 905	26590	QPSK	F	20	19.0	17.56	-0.03	Front	0	50	49	1:1	5	0.273	1.393	0.380	-
1 905	26590	QPSK	F	20	19.0	17.66	-0.02	Left	0	1	49	1:1	10	0.032	1.361	0.044	-
1 905	26590	QPSK	F	20	19.0	17.56	0.08	Left	0	50	49	1:1	10	0.031	1.393	0.043	-
1 905	26590	QPSK	F	20	19.0	17.66	-0.03	Top	0	1	49	1:1	10	0.239	1.361	0.325	-
1 905	26590	QPSK	F	20	19.0	17.56	-0.02	Top	0	50	49	1:1	10	0.228	1.393	0.318	-
ANSI/ IEEE C95.1 - 2005- Safety Limit													Body				
Spatial Peak													1.6 W/kg				
Uncontrolled Exposure/ General Population													Averaged over 1 gram				

LTE FDD Band 26 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	22.5	21.25	-0.11	Rear	0	1	0	1:1	5	0.574	1.334	0.766	-
831.5	26865	QPSK	A	15	22.5	21.19	0.05	Rear	0	36	0	1:1	5	0.585	1.352	0.791	C9
831.5	26865	QPSK	A	15	22.5	21.25	0.06	Front	0	1	0	1:1	5	0.346	1.334	0.462	
831.5	26865	QPSK	A	15	22.5	21.19	0.04	Front	0	36	0	1:1	5	0.360	1.352	0.487	-
831.5	26865	QPSK	A	15	22.5	21.25	0.08	Right	0	1	0	1:1	10	0.121	1.334	0.161	-
831.5	26865	QPSK	A	15	22.5	21.19	-0.03	Right	0	36	0	1:1	10	0.191	1.352	0.258	-
831.5	26865	QPSK	A	15	22.5	21.25	-0.19	Bottom	0	1	0	1:1	10	0.355	1.334	0.474	-
831.5	26865	QPSK	A	15	22.5	21.19	0.11	Bottom	0	36	0	1:1	10	0.304	1.352	0.411	-
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																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 549.5	40185	QPSK	B	20	20.5	19.43	-0.16	Rear	0	1	0	1:1.58	5	0.589	1.279	0.753	-
2 506	39750	QPSK	B	20	20.5	19.30	0.12	Rear	0	1	0	1:1.58	5	0.634	1.318	0.836	
2 593	40620	QPSK	B	20	20.5	19.23	0.17	Rear	0	1	0	1:1.58	5	0.568	1.340	0.761	
2 636.5	41055	QPSK	B	20	20.5	19.17	0.14	Rear	0	1	0	1:1.58	5	0.519	1.358	0.705	
2 680	41490	QPSK	B	20	20.5	19.16	0.16	Rear	0	1	0	1:1.58	5	0.377	1.361	0.513	
2 549.5	40185	QPSK	B	20	20.5	19.43	0.10	Rear	0	50	0	1:1.58	5	0.633	1.279	0.810	-
2 506	39750	QPSK	B	20	20.5	19.29	0.10	Rear	0	50	0	1:1.58	5	0.647	1.321	0.855	
2 593	40620	QPSK	B	20	20.5	19.17	0.12	Rear	0	50	0	1:1.58	5	0.608	1.358	0.826	
2 636.5	41055	QPSK	B	20	20.5	19.14	0.14	Rear	0	50	0	1:1.58	5	0.567	1.368	0.776	
2 680	41490	QPSK	B	20	20.5	19.13	0.10	Rear	0	50	0	1:1.58	5	0.470	1.371	0.644	
2 549.5	40185	QPSK	B	20	20.5	19.40	0.11	Rear	0	100	0	1:1.58	5	0.662	1.288	0.853	C10
2 549.5	40185	QPSK	B	20	20.5	19.43	0.08	Front	0	1	0	1:1.58	5	0.322	1.279	0.412	
2 549.5	40185	QPSK	B	20	20.5	19.43	0.09	Front	0	50	0	1:1.58	5	0.326	1.279	0.417	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.13	Left	0	1	0	1:1.58	10	0.067	1.279	0.086	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.15	Left	0	50	0	1:1.58	10	0.067	1.279	0.086	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.04	Bottom	0	1	0	1:1.58	10	0.231	1.279	0.295	-
2 549.5	40185	QPSK	B	20	20.5	19.43	0.00	Bottom	0	50	0	1:1.58	10	0.231	1.279	0.295	
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	132322	QPSK	B	20	19.0	17.92	-0.18	Rear	0	1	0	1:1	5	0.347	1.282	0.445	-
1 745	132322	QPSK	B	20	19.0	17.76	-0.17	Rear	0	50	0	1:1	5	0.334	1.330	0.444	-
1 745	132322	QPSK	B	20	19.0	17.92	-0.07	Front	0	1	0	1:1	5	0.277	1.282	0.355	-
1 745	132322	QPSK	B	20	19.0	17.76	-0.14	Front	0	50	0	1:1	5	0.247	1.330	0.329	-
1 745	132322	QPSK	B	20	19.0	17.92	0.18	Left	0	1	0	1:1	10	0.079	1.282	0.101	-
1 745	132322	QPSK	B	20	19.0	17.76	-0.04	Left	0	50	0	1:1	10	0.084	1.330	0.112	-
1 745	132322	QPSK	B	20	19.0	17.92	-0.14	Bottom	0	1	0	1:1	10	0.215	1.282	0.276	-
1 745	132322	QPSK	B	20	19.0	17.76	0.16	Bottom	0	50	0	1:1	10	0.259	1.330	0.344	-
1 745	132322	QPSK	F	20	18.0	17.23	0.00	Rear	0	1	49	1:1	5	0.509	1.194	0.608	-
1 745	132322	QPSK	F	20	18.0	17.18	0.04	Rear	0	50	49	1:1	5	0.512	1.208	0.618	C11
1 745	132322	QPSK	F	20	18.0	17.23	-0.06	Front	0	1	49	1:1	5	0.230	1.194	0.275	-
1 745	132322	QPSK	F	20	18.0	17.18	0.02	Front	0	50	49	1:1	5	0.237	1.208	0.286	-
1 745	132322	QPSK	F	20	18.0	17.23	-0.07	Left	0	1	49	1:1	10	0.040	1.194	0.048	-
1 745	132322	QPSK	F	20	18.0	17.18	0.01	Left	0	50	49	1:1	10	0.040	1.208	0.048	-
1 745	132322	QPSK	F	20	18.0	17.23	-0.03	Top	0	1	49	1:1	10	0.269	1.194	0.321	-
1 745	132322	QPSK	F	20	18.0	17.18	-0.01	Top	0	50	49	1:1	10	0.265	1.208	0.320	-
ANSI/IEEE C95.1 - 2005- Safety Limit													Body				
Spatial Peak													1.6 W/kg				
Uncontrolled Exposure/ General Population													Averaged over 1 gram				

NR FDD Band n5 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.16	Rear	0	1	104	1:1	5	0.552	1.337	0.738	C12
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	-0.13	Rear	0	50	56	1:1	5	0.535	1.346	0.720	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.18	Front	0	1	104	1:1	5	0.360	1.337	0.481	
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	0.08	Front	0	50	56	1:1	5	0.332	1.346	0.447	
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.12	Right	0	1	104	1:1	10	0.097	1.337	0.130	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	0.11	Right	0	50	56	1:1	10	0.106	1.346	0.143	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.24	0.17	Bottom	0	1	104	1:1	10	0.227	1.337	0.303	-
836.5	167300	DFT-s QPSK	A	20	22.5	21.21	0.00	Bottom	0	50	56	1:1	10	0.227	1.346	0.306	-
836.5	167300	CP QPSK	A	20	22.5	21.03	-0.14	Rear	0	1	1	1:1	5	0.476	1.403	0.668	-
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.17	Rear	0	1	137	1:1	5	0.769	1.186	0.912	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.15	Rear	0	135	69	1:1	5	0.777	1.167	0.907	C13
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.81	0.02	Rear	0	270	0	1:1	5	0.766	1.172	0.898	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.17	Front	0	1	137	1:1	5	0.387	1.186	0.459	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	0.08	Front	0	135	69	1:1	5	0.414	1.167	0.483	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	0.11	Left	0	1	137	1:1	10	0.052	1.186	0.062	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	-0.12	Left	0	135	69	1:1	10	0.051	1.167	0.060	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.76	-0.01	Bottom	0	1	137	1:1	10	0.235	1.186	0.279	-
2 592.99	518598	DFT-s QPSK	B	100	18.5	17.83	-0.14	Bottom	0	135	69	1:1	10	0.238	1.167	0.278	-
2 592.99	518598	CP QPSK	B	100	18.5	17.31	-0.13	Rear	0	1	1	1:1	5	0.632	1.315	0.831	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.12	Rear	0	1	137	1:1	5	0.349	1.250	0.436	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.02	Front	0	1	137	1:1	5	0.268	1.250	0.335	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.09	Left	0	1	137	1:1	10	0.022	1.250	0.028	-
2 592.99	518598	DFT-s QPSK	F	100	18.5	17.53	0.15	Top	0	1	137	1:1	10	0.245	1.250	0.306	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	0.15	Rear	0	1	137	1:1	5	0.449	1.271	0.571	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	-0.01	Front	0	1	137	1:1	5	0.285	1.271	0.362	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	-0.06	Left	0	1	137	1:1	10	0.238	1.271	0.302	-
2 592.99	518598	DFT-s QPSK	H	100	18.5	17.46	0.16	Top	0	1	137	1:1	10	0.052	1.271	0.066	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.00	Rear	0	1	137	1:1	5	0.200	1.172	0.234	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.00	Front	0	1	137	1:1	5	0.065	1.172	0.076	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	0.08	Right	0	1	137	1:1	10	0.027	1.172	0.032	-
2 592.99	518598	DFT-s QPSK	E	100	18.5	17.81	-0.14	Top	0	1	137	1:1	10	0.048	1.172	0.056	-
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB Offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	0.07	Rear	0	1	214	1:1	5	0.354	1.315	0.466	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	-0.04	Rear	0	108	108	1:1	5	0.347	1.337	0.464	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	-0.14	Front	0	1	214	1:1	5	0.207	1.315	0.272	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	-0.03	Front	0	108	108	1:1	5	0.183	1.337	0.245	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	-0.06	Left	0	1	214	1:1	10	0.063	1.315	0.083	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	0.04	Left	0	108	108	1:1	10	0.064	1.337	0.086	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.81	-0.03	Bottom	0	1	214	1:1	10	0.245	1.315	0.322	-
1 745	349000	DFT-s QPSK	B	40	19.0	17.74	0.00	Bottom	0	108	108	1:1	10	0.241	1.337	0.322	-
1 745	349000	CP QPSK	B	40	19.0	17.52	-0.02	Rear	0	1	1	1:1	5	0.255	1.406	0.359	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.09	Rear	0	1	214	1:1	5	0.393	1.183	0.465	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	0.02	Rear	0	108	108	1:1	5	0.402	1.194	0.480	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.13	Front	0	1	214	1:1	5	0.276	1.183	0.327	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.02	Front	0	108	108	1:1	5	0.282	1.194	0.337	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	0.01	Left	0	1	214	1:1	10	0.034	1.183	0.040	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	0.14	Left	0	108	108	1:1	10	0.040	1.194	0.048	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.27	-0.05	Top	0	1	214	1:1	10	0.231	1.183	0.273	-
1 745	349000	DFT-s QPSK	F	40	18.0	17.23	-0.04	Top	0	108	108	1:1	10	0.239	1.194	0.285	-
1 745	349000	CP QPSK	F	40	18.0	16.71	-0.06	Rear	0	1	1	1:1	5	0.461	1.346	0.621	C14
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 Hotspot SAR																	
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	-0.15	Rear	0	1	271	1:1	5	0.377	1.245	0.469	-
3 930	662000	DFT-s QPSK	G	100	16.0	14.94	0.16	Rear	0	1	271	1:1	5	0.314	1.276	0.401	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.03	Rear	0	135	138	1:1	5	0.376	1.279	0.481	-
3 930	662000	DFT-s QPSK	G	100	16.0	14.85	0.07	Rear	0	135	69	1:1	5	0.321	1.303	0.418	-
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	0.19	Front	0	1	271	1:1	5	0.189	1.245	0.235	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.15	Front	0	135	138	1:1	5	0.168	1.279	0.215	-
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	0.13	Left	0	1	271	1:1	10	0.212	1.245	0.264	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.09	Left	0	135	138	1:1	10	0.137	1.279	0.175	-
3 750	650000	DFT-s QPSK	G	100	16.0	15.05	0.14	Top	0	1	271	1:1	10	0.048	1.245	0.060	-
3 750	650000	DFT-s QPSK	G	100	16.0	14.93	0.18	Top	0	135	138	1:1	10	0.048	1.279	0.061	-
3 750	650000	CP QPSK	G	100	16.0	15.04	0.15	Rear	0	1	1	1:1	5	0.407	1.247	0.508	C15
3 500.01	633334	DFT-s QPSK	G	100	16.0	14.89	0.16	Rear	0	1	137	1:1	5	0.368	1.291	0.475	-
3 500.01	633334	DFT-s QPSK	G	100	16.0	14.89	0.18	Rear	0	135	69	1:1	5	0.350	1.291	0.452	-
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

DTS Hotspot SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 437	6	802.11b	H	20	1	15.0	14.83	0.17	Rear	98.9	5	0.511	1.040	1.011	0.537	C16
2 437	6	802.11b	H	20	1	15.0	14.83	0.12	Front	98.9	5	0.310	1.040	1.011	0.326	-
2 437	6	802.11b	H	20	1	15.0	14.83	-0.05	Left	98.9	10	0.183	1.040	1.011	0.192	-
2 437	6	802.11b	H	20	1	15.0	14.83	0.13	Top	98.9	10	0.057	1.040	1.011	0.060	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	0.14	Rear	98.9	5	0.341	1.040	1.011	0.359	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	0.16	Front	98.9	5	0.208	1.040	1.011	0.219	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	-0.12	Left	98.9	10	0.060	1.040	1.011	0.063	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	-0.12	Right	98.9	10	0.064	1.040	1.011	0.067	-
2 437	6	802.11b	H+J	20	1	18.0	17.90	0.10	Top	98.9	10	0.078	1.040	1.011	0.082	-
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII 3 Hotspot SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.00	Rear	86.0	5	0.158	1.148	1.163	0.211	-
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.00	Front	86.0	5	0.070	1.148	1.163	0.093	-
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.15	Left	86.0	10	0.169	1.148	1.163	0.226	C17
5 775	155	802.11ac	G	80	MCS0	12.0	11.40	0.15	Top	86.0	10	0.033	1.148	1.163	0.044	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	0.00	Rear	86.0	5	0.123	1.104	1.163	0.158	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	0.00	Front	86.0	5	0.094	1.104	1.163	0.121	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	-0.17	Left	86.0	10	0.158	1.104	1.163	0.203	-
5 775	155	802.11ac	G+I	80	MCS0	15.0	14.68	0.10	Top	86.0	10	0.037	1.104	1.163	0.047	-
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 10 gram							

DSS Tethering SAR														
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 402	0	DH5	H	20	14.0	13.87	-0.14	Rear	5	0.350	1.030	1.009	0.364	C18
2 402	0	DH5	H	20	14.0	13.87	0.12	Front	5	0.221	1.030	1.009	0.230	-
2 402	0	DH5	H	20	14.0	13.87	-0.07	Left	10	0.096	1.030	1.009	0.100	-
2 402	0	DH5	H	20	14.0	13.87	0.10	Top	10	0.039	1.030	1.009	0.041	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	-0.05	Rear	5	0.266	1.054	1.009	0.283	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	-0.16	Front	5	0.235	1.054	1.009	0.250	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	-0.07	Left	10	0.113	1.054	1.009	0.120	-
2 440	17	LE 1M(193)	H	20	14.0	13.77	0.18	Top	10	0.021	1.054	1.009	0.022	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

13.1.3 Phablet SAR Measurement Considerations

The 1g SAR test for Body worn and Hotspot conditions in WWAN mode and WLAN/BT mode of this DUT is performed at 5 mm separation distance for Rear, Front, so 10g Phablet SAR is not required per FCC KDB 941225 D07 UMPC Mini Tablet v01r02 and 2025 April TCBC Workshop Interim guidance.

13.1.3.1 Phablet SAR Measurement Results

NFC Phablet SAR_10g							
Freq. (MHz)	Mode	Data Rate (Kbps)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 10g SAR (W/Kg)	Plot No.
13.56	NFC (Type A)	106	0.00	Rear	0	0.012	
13.56	NFC (Type B)	106	0.01	Rear	0	0.015	D1
13.56	NFC (Type F)	106	0.00	Rear	0	0.000	
13.56	NFC (Type B)	106	0.00	Front	0	0.000	
13.56	NFC (Type B)	106	0.00	Left	0	0.000	
13.56	NFC (Type B)	106	0.00	Top	0	0.000	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population				Hand 4.0 W/kg Averaged over 10 gram			

UNII 2A Phablet SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 270	54	802.11n	G	40	MCS0	12.0	11.98	0.15	Left	85.9	0	0.371	1.005	1.164	0.434	-
5 270	54	802.11n	G	40	MCS0	12.0	11.98	0.13	Top	85.9	0	0.043	1.005	1.164	0.050	-
5 270	54	802.11n	G+I	40	MCS8	15.0	14.32	-0.14	Left	85.9	0	0.440	1.374	1.164	0.704	-
5 270	54	802.11n	G+I	40	MCS8	15.0	14.32	0.00	Top	85.9	0	0.032	1.374	1.164	0.051	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Hand 4.0 W/kg Averaged over 10 gram							

UNII 2C Phablet SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 690	138	802.11ac	G	80	MCS0	12.0	11.83	-0.04	Left	86.0	0	0.443	1.040	1.163	0.536	-
5 690	138	802.11ac	G	80	MCS0	12.0	11.83	-0.16	Top	86.0	0	0.098	1.040	1.163	0.119	-
5 690	138	802.11ac	G+I	80	MCS0	15.0	14.11	-0.05	Left	86.0	0	0.563	1.503	1.163	0.984	D2
5 690	138	802.11ac	G+I	80	MCS0	15.0	14.11	0.00	Top	86.0	0	0.090	1.503	1.163	0.157	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Hand 4.0 W/kg Averaged over 10 gram							

UNII 4 Phablet SAR																
Freq. (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 10g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 855	171	802.11ac	G	80	MCS0	12.0	11.55	0.00	Left	86.0	0	0.318	1.109	1.163	0.410	-
5 855	171	802.11ac	G	80	MCS0	12.0	11.55	-0.14	Top	86.0	0	0.057	1.109	1.163	0.074	-
5 855	171	802.11ac	G+I	80	MCS0	15.0	14.27	0.13	Left	86.0	0	0.393	1.268	1.163	0.579	-
5 855	171	802.11ac	G+I	80	MCS0	15.0	14.27	0.00	Top	86.0	0	0.047	1.268	1.163	0.069	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Hand 4.0 W/kg Averaged over 10 gram							

13.2 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 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 5 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. The 1g SAR test for Body worn and Hotspot in WWAN mode and WLAN/BT mode of this DUT is performed Rear, Front at 5 mm and Left, Right, Top, Bottom at 10mm separation distance, so 10g Phablet SAR is not required per FCC KDB 941225 D07 UMPC Mini Tablet v01r02 at Rear, Front.
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 utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
11. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspot operation (with actual simultaneous transmission of a transmitter with WiFi) was not activated. See Appendix .L for multi-Tx simultaneous transmission analysis results.

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 D01v06, 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 D01v06, 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 sub frames 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. 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.

NR Notes:

1. NR This device supports SA and NSA mode for NR implementation. 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 TDD 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 DFT-s OFDM QPSK 1RB Mid offset as CW was the Limitation of the manufacturer's S/W tool(FTM) setup.

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 10 g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement.
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi 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 1 g 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. In the technical documentation, the maximum duty factor of the declared BT was applied to the SAR results. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.
2. Head and Bluetooth tethering SAR were evaluated for BT BDR tethering applications.

14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 section 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 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is $\leq 1.6\text{W/kg}$ for 1g SAR and $\leq 4\text{ W/kg}$ 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.

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

This device is enabled with S.LSI Time average SAR algorithm with pre-defined sub6 antenna groups (AG0 and AG1). Simultaneous transmission analysis is performed per antenna groups. Section 14.5 contains analysis to demonstrate the AG0 and AG1 are operate mutually exclusive.

14.1 Sub6 Antenna Groups

S.LSI Time average SAR(TAS) algorithm 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:

Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside TAS is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs. This device supports two sub6 AG: AG0 and AG1, with AG0 having 2 antenna (A,B) and AG1 having 4 antennas (F, G, H, E). The conditions are verified through the following criteria.

The highest reported SAR at Plimit (or Pmax when Plimit > Pmax) for each antenna should be obtained out of all supported WWAN technologies and frequency bands for each exposure condition. Demonstrate that the sum of reported SAR of antenna from each of the sub6 AGs and the sum of RF exposure of TAS should be less than the regulatory limit as given below for each RSI.

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, and demonstrate that the sum of these RF exposures meets

$$\text{Max.SAR.AG0} + \text{Max.SAR.AG1} + \text{Max.WLAN 5GHz} + \text{Max.Bluetooth} \leq 1.6 \text{ (for 1g SAR or 4.0 for 10g)}$$

If sum result with both antenna group and BT/WAN exceeds the FCC SAR limit of 1.6 W/kg 1g, 4.0W/kg 10g, can use below contents.

If the sum result with each antenna group and BT/WLAN exceeds the FCC SAR limit of 1.6 W/kg 1g, 4.0 W/kg 10g, the SPLSR was re-evaluated according to ISED KDB 447498 D01v06 4.3.2.

AG0, AG1, WLAN/BT are described in the table below.

AG0	
Ant.A	GSM 850 / UMTS Band 5 LTE Band 5/LTE Band 12/ LTE Band 13/LTE Band 17/ LTE Band 26 NR Band n5
Ant.B	GSM 1900 / UMTS Band 2/ UMTS Band 4 LTE Band 2/LTE Band 4/LTE Band 25/LTE Band 41/LTE Band 66 NR Band n41/ NR Band n66,

AG1	
Ant.F	LTE Band 2/ LTE Band 4/ LTE Band 25/ LTE Band 66 NR Band n41 SRS2/ NR Band n66,
Ant.G	NR Band n77
Ant.H	NR Band n41 SRS 3
Ant.E	NR Band n41 SRS 4

WLAN/BT	
Ant.G	WLAN 5 GHz
Ant.I	WLAN 5 GHz
Ant. H	WLAN 2.4 GHz, Bluetooth, Bluetooth LE
Ant. J	WLAN 2.4 GHz

NFC	
	NFC

14.2 Head SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0			
Position	Ant A	Ant B	Max.AG0
Left Touch	0.244	0.193	0.244
Left Tilt	0.153	0.132	0.153
Right Touch	0.314	0.211	0.314
Right Tilt	0.162	0.142	0.162

The Maximum measurement result for AG1					
Position	Ant.F	Ant.G	Ant.H	Ant.E	Max.AG1
Left Touch	0.430	0.105	0.206	0.166	0.430
Left Tilt	0.440	0.093	0.163	0.124	0.440
Right Touch	0.674	0.566	0.602	0.024	0.674
Right Tilt	0.685	0.253	0.348	0.03	0.685

The Maximum measurement result for WLAN/BT						
Position	DTS Ant. H	DTS MIMO	UNII Ant. G	UNII MIMO	DSS	Bluetooth LE
Left Touch	0.101	0.162	0.049	0.032	0.105	0.067
Left Tilt	0.069	0.075	0.056	0.037	0.072	0.063
Right Touch	0.426	0.418	0.128	0.253	0.319	0.266
Right Tilt	0.147	0.149	0.120	0.107	0.159	0.130

Simultaneous Transmission analysis for Head SAR				
Position	AG0+AG1+WLAN2.4 GHz	AG0+AG1+BT	AG0+AG1+ WLAN5 GHz	AG0+AG1+WLAN5 GHz+BT
Left Touch	0.836	0.723	0.779	0.828
Left Tilt	0.668	0.649	0.665	0.721
Right Touch	1.414	1.241	1.307	1.560
Right Tilt	0.996	0.967	1.006	1.126

14.3 Bodyworn SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0			
Position	Ant A	Ant B	Max.AG0
Rear	0.967	0.912	0.967
Front	0.517	0.483	0.517

The Maximum measurement result for AG1					
Position	Ant.F	Ant.G	Ant.H	Ant.E	Max.AG1
Rear	0.701	0.508	0.571	0.234	0.701
Front	0.393	0.235	0.362	0.076	0.393

The Maximum measurement result for WLAN/BT						
Position	DTS Ant. H	DTS MIMO	UNII Ant. G	UNII MIMO	DSS	Bluetooth LE
Rear	0.537	0.359	0.232	0.392	0.364	0.283
Front	0.326	0.219	0.109	0.217	0.230	0.250

Simultaneous Transmission analysis for Bodyworn SAR				
Position	AG0+AG1+WLAN2.4 GHz	AG0+AG1+BT	AG0+AG1+ WLAN5 GHz	AG0+AG1+WLAN5 GHz+BT
Rear	See sec 14.6.1	See sec 14.6.1	See sec 14.6.1	See sec 14.6.1
Front	1.236	1.127	1.160	1.377

14.4 Hotspot SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0			
Position	Ant A	Ant B	Max.AG0
Rear	0.840	0.912	0.912
Front	0.517	0.483	0.517
Left		0.119	0.119
Right	0.390		0.390
Top			
Bottom	0.474	0.399	0.474

The Maximum measurement result for AG1					
Position	Ant.F	Ant.G	Ant.H	Ant.E	Max.AG1
Rear	0.701	0.508	0.571	0.234	0.701
Front	0.393	0.235	0.362	0.076	0.393
Left	0.048	0.264	0.302		0.302
Right				0.032	0.032
Top	0.325	0.061	0.066	0.056	0.325
Bottom					

The Maximum measurement result for WLAN/BT						
Position	DTS Ant. H	DTS MIMO	UNII Ant. G	UNII MIMO	DSS	Bluetooth LE
Rear	0.537	0.359	0.211	0.158	0.364	0.283
Front	0.326	0.219	0.093	0.121	0.250	0.250
Left	0.192	0.063	0.226	0.203	0.100	0.120
Right		0.067				
Top	0.06	0.082	0.044	0.047	0.041	0.022
Bottom						

Simultaneous Transmission analysis for Hotspot SAR				
Position	AG0+AG1+WLAN2.4 GHz	AG0+AG1+BT	AG0+AG1+ WLAN5 GHz	AG0+AG1+WLAN5 GHz+BT
Rear	See sec 14.6.2	See sec 14.6.2	See sec 14.6.2	See sec 14.6.2
Front	1.236	1.031	1.160	1.281
Left	0.613	0.647	0.541	0.767
Right	0.489	0.422	0.422	0.422
Top	0.407	0.372	0.366	0.413
Bottom	0.474	0.474	0.474	0.474

14.5 Phablet SAR Simultaneous Transmission Analysis

Position	UNII Ant. G	UNII MIMO	Worst
Rear			
Front			
Left	0.536	0.984	0.984
Right			
Top	0.157	0.157	0.157
Bottom			

Position	NFC
Rear	0.015
Front	0.000
Left	0.000
Right	
Top	0.000
Bottom	

Simultaneous Transmission analysis for Phablet SAR	
Position	NFC + UNII
Rear	0.015
Front	0.000
Left	0.984
Right	
Top	0.157
Bottom	

14.6 SAR to Peak Location Separation Ratio (SPLSR)

FCC KDB 447498 D01v06 General RF Exposure Guidance introduces a new formula for calculating the SAR a Peak Location Separation Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR_i = (SAR_1 + SAR_2)^{1.5} / R_i$$

Where:

SAR₁ is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR₂ is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_i is the separation distance between the pair of simultaneous transmitting antennas, When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum 1-g of SAR > 1.6 W/kg and with the sum 10-g of SAR > 4 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / R_i \leq 0.04 \text{ for 1g SAR and } (SAR_1 + SAR_2)^{1.5} / R_i \leq 0.1 \text{ for 10g SAR}$$

14.6 Sum-Peak Location Separation Ratio

Per May 2022 TCB Workshop, this Procedure can only be applied when simultaneous transmission SAR is > 1.6 W/kg, it does not meet SPLSR criteria, and antenna pair is co-located

Test Procedure:

1. Instead of doing a small volume scan over a co-located antenna pair, sum the SAR value of the co-located pair and use that value in SPLSR calculation.
2. This calculation use the minimum distance between the spatially antenna and the closest antenna of the co-located antenna pair to be conservative
3. Sum-Peak Location Separation Ratio

14.6.1 BodyWorn (Rear) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM850	A	4	75	-205	0.967
GSM1900	B	-55	72	-205.8	0.462
UMTS B2	B	-53.5	72	-205.7	0.581
UMTS B4	B	-55	87	-204	0.325
UMTS B5	A	-6.5	76.5	-205	0.718
LTE B12	A	-3.5	85.5	-205	0.451
LTE B13	A	-8	84	-205	0.840
LTE B26	A	-8	87	-205	0.791
LTE B66	B	-65.5	87	-209	0.445
LTE B25	B	-53.5	84	-209	0.716
LTE B41	B	-42.2	75.6	-204	0.855
NR n5	A	4	88.5	-205	0.738
NR n66	B	-55	67.5	-205.7	0.466
NR n41	B	-44.6	79.4	-204	0.912

Ant Group 1

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE B66	F	-40	-75	-205.3	0.618
LTE B25	F	-55	-75	-205.4	0.701
NR n66	F	-55	-75	-204	0.621
NR n41 SRS#2	F	-36.2	-78.4	-205	0.436
NR n41 SRS#3	H	-48.6	-64.6	-205	0.571
NR n41 SRS#4	E	17.8	-77.4	-204	0.234
NR n77	G	-60.4	-67.8	-209	0.508

WLAN/BT

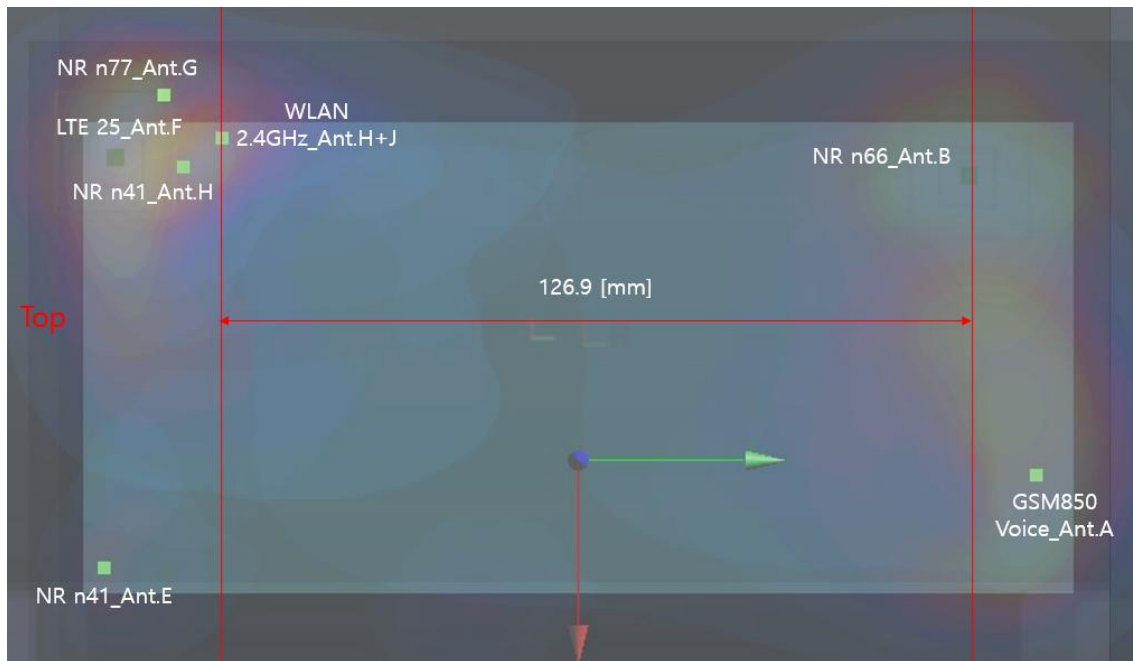
Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
WLAN 2.4 GHz Ant1	H	-49.8	-60.6	-205	0.537
WLAN 2.4 GHz MIMO	H+J	-53.2	-59.4	-205	0.359
Bluetooth	H	-44	-61.8	-205	0.364
WLAN 5 GHz Ant1	G	-61	-82	-208	0.232
WLAN 5 GHz MIMO	G+I	-59	-72	-208	0.392

14.6.1.1 Group analysis SPLSR AG0 + AG1 + WLAN 2.4 GHz

	AG0	AG1	WLAN 2.4 GHz
Min Y-axis(mm)	67.5		
Max SAR(W/kg)	0.967		
Max Y-axis(mm)		-64.6	-59.4
Max SAR(W/kg)		0.701	0.537
AG0, (AG1, WLAN2.4 GHz) Distance(mm)		126.9	
(AG1+WLAN 2.4 GHz) SAR(W/kg)		1.238	
(AG0+AG1+WLAN 2.4 GHz) SAR(W/kg)		2.205	
AG0, AG1+WLAN 2.4 GHz (SPLSR)		0.026	

SPLSR Plot for AG0 + AG1 + WLAN 2.4 GHz

AG0 + AG1 + WLAN 2.4 GHz

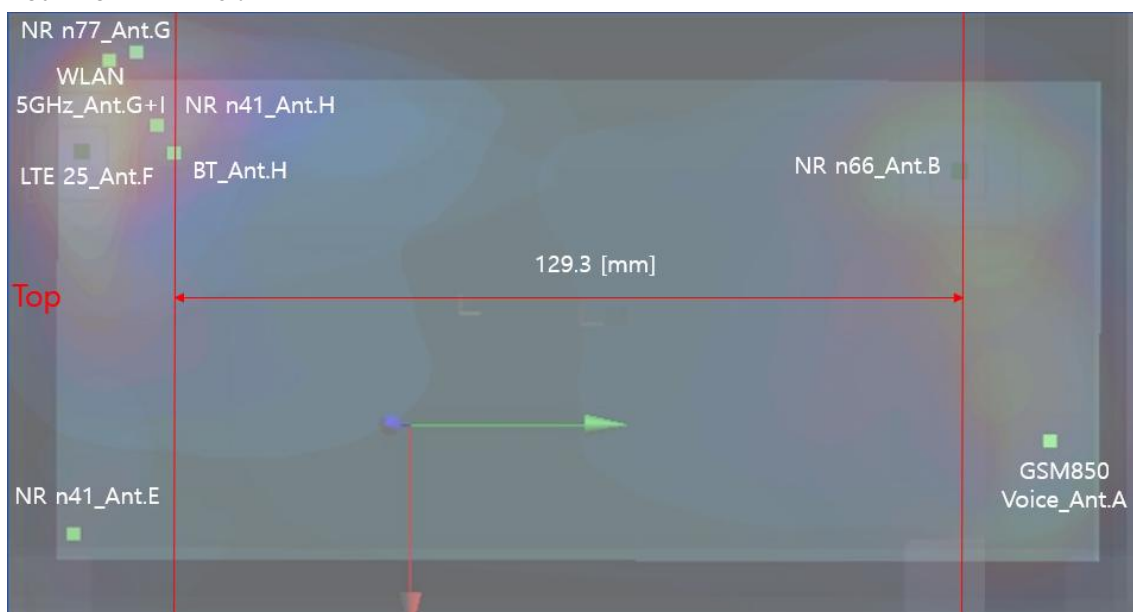


14.6.1.2 Group analysis SPLSR AG0 + AG1 + WLAN 5 GHz + BT

	AG0	AG1	WLAN 5 GHz+BT
Min Y-axis(mm)	67.5		
Max SAR(W/kg)	0.967		
Max Y-axis(mm)		-64.6	-61.8
Max SAR(W/kg)		0.701	0.756
AG0, (AG1, WLAN/BT) Distance(mm)		129.3	
(AG1+5 GHz WLAN+BT) SAR(W/kg)		1.457	
AG0+(AG1+5 GHz WLAN+BT) SAR(W/kg)		2.424	
AG0, (AG1+5 GHz WLAN+BT)(SPLSR)		0.029	

SPLSR Plot for AG0 + AG1 + WLAN 5 GHz + BT

AG0 + AG1 + WLAN 5 GHz + BT



14.6.2 Hotspot (Rear) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM850	A	4	75	-205	0.661
GSM1900	B	-55	72	-205.8	0.415
UMTS B2	B	-53.5	72	-205.7	0.581
UMTS B4	B	-55	87	-204	0.325
UMTS B5	A	-6.5	76.5	-205	0.718
LTE B12	A	-3.5	85.5	-205	0.451
LTE B13	A	-8	84	-205	0.840
LTE B26	A	-8	87	-205	0.791
LTE B66	B	-65.5	87	-209	0.445
LTE B25	B	-53.5	84	-209	0.716
LTE B41	B	-42.2	75.6	-204	0.855
NR n5	A	4	88.5	-205	0.738
NR n66	B	-55	67.5	-205.7	0.466
NR n41	B	-44.6	79.4	-204	0.912

Ant Group 1

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE B66	F	-40	-75	-205.3	0.618
LTE B25	F	-55	-75	-205.4	0.701
NR n66	F	-55	-75	-204	0.621
NR n41 SRS#2	F	-36.2	-78.4	-205	0.436
NR n41 SRS#3	H	-48.6	-64.6	-205	0.571
NR n41 SRS#4	E	17.8	-77.4	-204	0.234
NR n77	G	-60.4	-67.8	-209	0.508

WLAN/BT

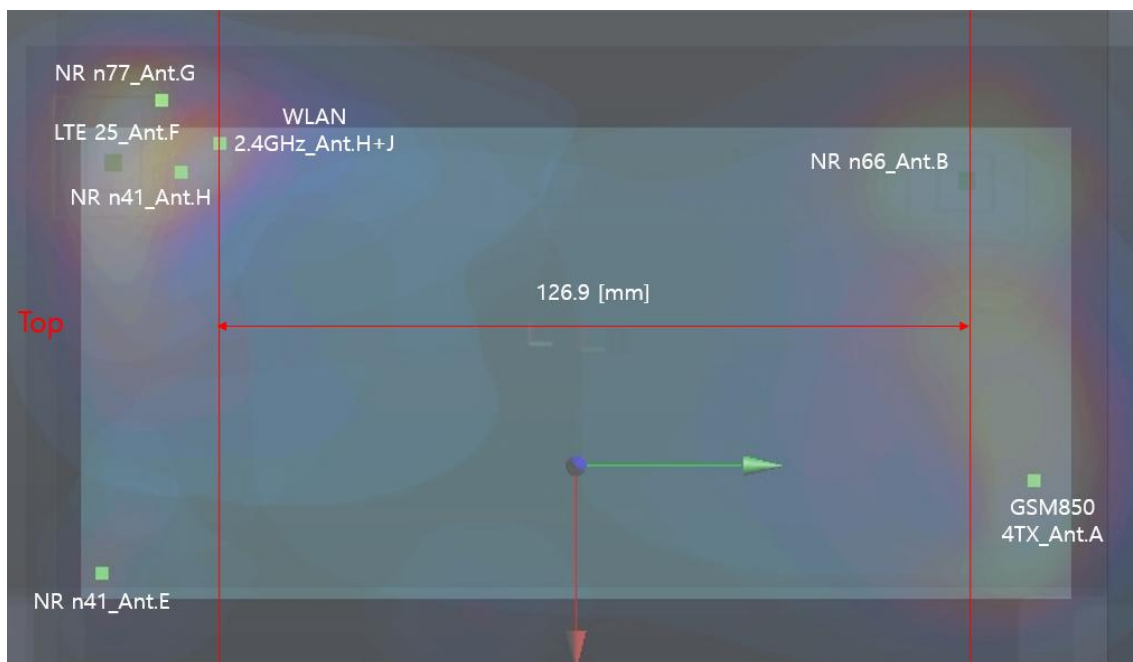
Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
WLAN 2.4GHz Ant1	H	-49.8	-60.6	-205	0.537
WLAN 2.4GHz MIMO	H+J	-53.2	-59.4	-205	0.359
Bluetooth	H	-44	-61.8	-205	0.364
WLAN 5GHz Ant1	G	-61	-82	-208	0.211
WLAN 5GHz MIMO	G+I	-59	-72	-208	0.158

14.6.2.1 Group analysis SPLSR AG0 + AG1 + WLAN 2.4GHz

	AG0	AG1	WLAN 2.4 GHz
Min Y-axis(mm)	67.5		
Max SAR(W/kg)	0.912		
Max Y-axis(mm)		-64.6	-59.4
Max SAR(W/kg)		0.701	0.537
AG0, (AG1, WLAN2.4 GHz) Distance(mm)		126.9	
(AG1+WLAN 2.4 GHz) SAR(W/kg)		1.238	
(AG0+AG1+WLAN 2.4 GHz) SAR(W/kg)		2.150	
AG0, AG1+WLAN 2.4GHz (SPLSR)		0.025	

SPLSR Plot for AG0 + AG1 + WLAN 2.4 GHz

AG0 + AG1 + WLAN 2.4 GHz

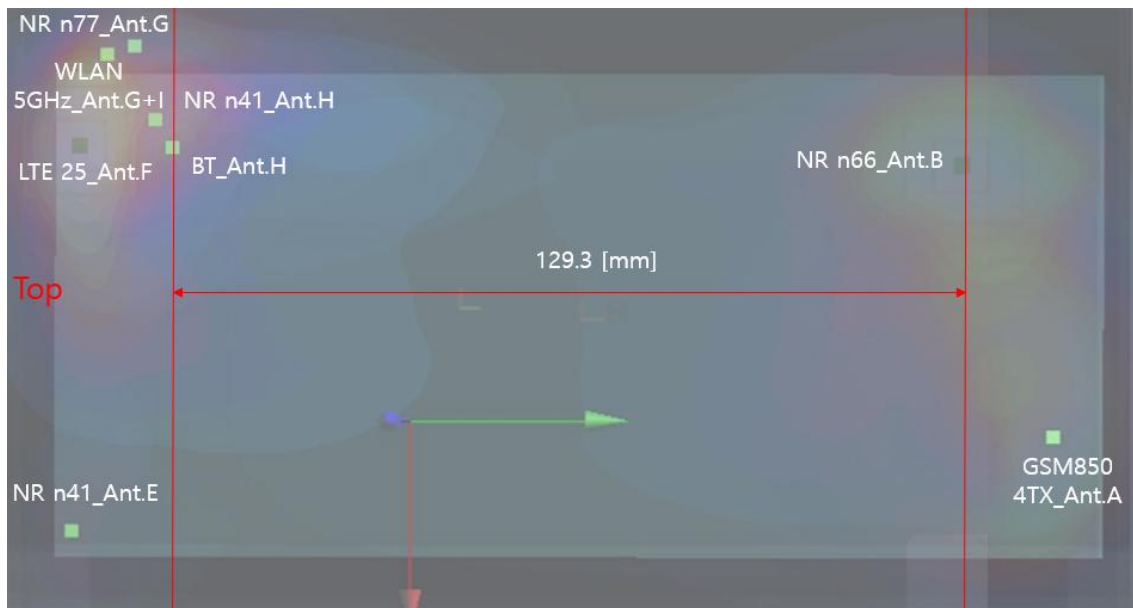


14.6.1.2 Group analysis SPLSR AG0 + AG1 + WLAN 5GHz + BT

	AG0	AG1	WLAN 5 GHz+BT
Min Y-axis(mm)	67.5		
Max SAR(W/kg)	0.912		
Max Y-axis(mm)		-64.6	-61.8
Max SAR(W/kg)		0.701	0.575
AG0, (AG1, WLAN/BT) Distance(mm)		129.3	
(AG1+5 GHz WLAN+BT) SAR(W/kg)		1.276	
AG0+(AG1+5 GHz WLAN+BT) SAR(W/kg)		2.188	
AG0, (AG1+5 GHz WLAN+BT)(SPLSR)		0.025	

SPLSR Plot for AG0 + AG1 + WLAN 5 GHz + BT

AG0 + AG1 + WLAN 5 GHz+ BT



15. 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.

16. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/5K9GA1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/5K3RA1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F/24/0058554/C/001	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/59CHA1/C/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/5K9GA1/A/01	N/A	N/A	N/A
Staubli	TX90 Lspeag	F11/5K3RA1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F/24/0058554/A/001	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/59CHA1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21144508	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331939309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331915309	12/26/2024	Annual	12/26/2025
SPEAG	DAE4	868	09/16/2025	Annual	09/16/2026
SPEAG	DAE4	1417	02/18/2025	Annual	02/18/2026
SPEAG	DAE4	446	03/19/2025	Annual	03/19/2026
SPEAG	DAE4	1720	04/23/2025	Annual	04/23/2026
SPEAG	E-Field Probe EX3DV4	7732	06/25/2025	Annual	06/25/2026
SPEAG	E-Field Probe EX3DV4	3797	01/21/2025	Annual	01/21/2026
SPEAG	E-Field Probe EX3DV4	3903	07/23/2025	Annual	07/23/2026
SPEAG	E-Field Probe ES3DV3	7654	06/02/2025	Annual	06/02/2026
SPEAG	E-Field Probe EX3DV4	3076	07/22/2025	Annual	07/22/2026
SPEAG	CLA13	1016	11/13/2025	Annual	11/13/2026
SPEAG	Dipole D750V3	1014	05/20/2025	Annual	05/20/2026
SPEAG	Dipole D835V2	441	04/18/2024	Biennial	04/18/2026
SPEAG	Dipole D1800V2	2d015	04/17/2025	Annual	04/17/2026
SPEAG	Dipole D1900V2	5d061	01/20/2025	Annual	01/20/2026
SPEAG	Dipole D2450V2	1049	03/13/2025	Annual	03/13/2026
SPEAG	Dipole D2600V2	1106	04/15/2025	Annual	04/15/2026
SPEAG	Dipole D3500V2	1040	01/16/2025	Annual	01/16/2026
SPEAG	Dipole D3700V2	1066	09/15/2025	Annual	09/15/2026
SPEAG	Dipole D3900V2	1019	05/21/2025	Annual	05/21/2026
SPEAG	Dipole D5GHzV2	1107	04/19/2024	Biennial	04/19/2026
Agilent	Power Meter E4419B	MY41291386	09/13/2025	Annual	09/13/2026
Agilent	Power Meter N1911A	MY45101406	05/19/2025	Annual	05/19/2026
Agilent	Power Sensor 8481A	SG1091286	09/09/2025	Annual	09/09/2026
H.P	Power Sensor 8481A	MY41090873	01/13/2025	Annual	01/13/2026
Agilent	Wideband Power Sensor N1921A	MY55220026	08/07/2025	Annual	08/07/2026
Agilent	11636B/Power Divider	58698	01/13/2025	Annual	01/13/2026
SPEAG	DAKS 3.5	1038	01/20/2025	Annual	01/20/2026
KEYSIGHT	MXA Signal Analyzer	MY49100108	01/07/2025	Annual	01/07/2026
H.P	Network Analyzer /8753E	JP38451384	08/19/2025	Annual	08/19/2026
Protek	NETWORK ANALYZER	X11-15305	02/10/2025	Annual	02/10/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/15/2025	Annual	09/15/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2025	Annual	07/29/2026

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
R&S	Wireless Communication Test Set CMW500	115733	03/20/2025	Annual	03/20/2026
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/18/2025	Annual	03/18/2026
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-15N	10453	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-30N	-	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-60N	32011	09/15/2025	Annual	09/15/2026
Agilent	Attenuator (3dB) 8493B	MY39260298	08/18/2025	Annual	08/18/2026
HP	Attenuator (20dB) 8493C	09271	08/18/2025	Annual	08/18/2026
RF COREA	Attenuator (30dB)	A-0830	06/24/2025	Annual	06/24/2026
Agilent	Directional Bridge 86205A	3140A04581	04/18/2025	Annual	04/18/2026
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/09/2025	Annual	06/09/2026
HP	Dual Directional Coupler	16072	09/15/2025	Annual	09/15/2026
Anritsu	Radio Communication Test Station MT8000A	6262036812	11/24/2025	Annual	11/24/2026
Anritsu	Radio Communication Test Station MT8000A	6262148305	12/23/2024	Annual	12/23/2025
Anritsu	Radio Communication Tester MT8820C	6201074225	01/13/2025	Annual	01/13/2026
Anritsu	Radio Communication Tester MT8820C	6200695605	03/21/2025	Annual	03/21/2026
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2025	Annual	05/21/2026
Anritsu	Radio Communication Tester MT8821C	6201664725	01/13/2025	Annual	01/13/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/20/2025	Annual	05/20/2026
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/13/2025	Annual	01/13/2026

Note: All measurements were performed within the valid calibration period of the specific equipment.

* 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.

17. Conclusion

The SAR and RF Exposure 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 absorption and distribution of electromagnetic energy in the body are very complex phenomena that 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.

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Appendix A. DUT Ant. Information & SETUP PHOTO

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

Report No.
HCT-SR-2512-FC009-P