

TEST REPORT

FCC SAR Part 1 Test for SC-55F
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2506-FC006-R1

DATE OF ISSUE
June 24, 2025

Tested by
Chan Min Ko



Technical Manager
Yun Jeang Heo



HCT CO., LTD.
Bongjai Huh
BongJai Huh / CEO

**HCT Co., Ltd.**

2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Tel. +82 31 645 6300 Fax. +82 31 645 6401

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FCC ID

A3LSMF766JPN

Applicant

SAMSUNG Electronics Co., Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, Korea

Product Name
Model Name
Multi Model Name

Mobile Phone
SC-55F
SCG35

Date of Test

May. 08, 2025 ~ Jun. 11, 2025

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing Lab
(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,
Gyeonggi-do, 17383 KOREA)

FCC Rule Part(s)

CFR § 2.1093

Test Results

PASS (SAR Limit : 1.6 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	Jun. 12, 2025	Initial Release
1	Jun. 24, 2025	Revised Sec. 4.6, 13.4

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 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 2019 TCBC Workshop Notes (IEEE 802.11ax)
- April 2022 TCBC Workshop Notes (Sum-Peak Location Separation Ratio)
- October 2024 TCBC Workshop Notes (CA-DL Test Reduction)

FCC RF Exposure evaluation of U-NII 6 -7 GHz Band of this device were measured by referring to the interim procedures in TCB Workshop document of Oct 2020, IEC/IEEE 62209-1528:2020 and also the App Note of SPEAG, the manufacturer of measuring equipment.

SAR Testing was performed using 6.5 GHz SAR Probe calibration factor according to FCC TCBC Document.

November 2017, October 2018, April 2019, November 2019, October 2020, October 2022, TCBC Workshop Notes.

SPEAG DASY6 System Handbook

SPEAG DASY6 Application Note (Interim Procedures for Operating at 6 -10 GHz) (ver.9)

IEEE 1528-2013

IEC TR 63170:2018

IEC 62479:2010

IEC/IEEE 63195-1:2022

2. Test Location

2.1 Test Laboratory

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

2.2 Test Facilities

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

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

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SC-55F
Multi Model Name	SCG35
Equipment Type	Mobile Phone
FCC ID	A3LSMF766JPN
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	0.43	0.95	0.86	N/A
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCE	<0.1	0.66	0.99	N/A
UMTS Band 5	826.4 MHz ~ 846.6 MHz	PCE	0.56	1.20	1.20	N/A
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCE	0.11	0.80	1.15	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	0.60	1.00	1.00	N/A
LTE FDD Band 12	699.7 MHz ~ 715.3 MHz	PCE	0.53	0.71	0.71	N/A
LTE FDD Band 13	779.5 MHz ~ 784.5 MHz	PCE	0.52	1.19	1.19	N/A
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCE	0.81	0.99	0.99	N/A
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCE	0.27	0.78	1.00	N/A
NR FDD Band n5	826.5 MHz ~ 846.5 MHz	PCE	0.52	0.94	0.94	N/A
NR TDD Band n41	2 506.02 MHz ~ 2 679.99 MHz	PCE	0.57	0.77	0.99	N/A
NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz	PCE	0.23	0.94	0.94	N/A
2.4 GHz WLAN	2 412 MHz ~ 2 462 MHz	DTS	0.54	0.35	0.52	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	0.22	0.55	0.75	N/A
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.20	0.35	0.59	N/A
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.17	0.22	0.40	N/A
U-NII-4	5 845 MHz ~ 5 885 MHz	NII	0.22	0.27	0.33	N/A
6 GHz WLAN	5 925 MHz ~ 7 115 MHz	6CD/6VL	0.13	<0.1	<0.1	N/A
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS/DTS	0.35	0.33	0.64	N/A
NFC	13.56 MHz	DXX	N/A	N/A	N/A	<0.10
Simultaneous SAR per KDB 690783 D01v01r03			1.592	1.560	1.578	<0.10
Date(s) of Tests:	May. 08, 2025 ~ Jun. 11, 2025					

The Highest Reported APD/PD						
Band	Tx. Frequency	Equipment Class	APD (4 cm ²)			
			mW/cm ² Head	mW/cm ² Body-Worn	mW/cm ² Hotspot	mW/cm ² Extremity
6 GHz WLAN	5 925 MHz ~ 7 115 MHz	6CD/6VL	0.057	0.016	0.038	N/A
Band	Tx. Frequency	Equipment Class	iPD (4 cm ²)			
			mW/cm ² psPD			
6 GHz WLAN	5 925 MHz ~ 7 115 MHz	6CD/6VL	0.347			
Date(s) of Tests:	May. 25, 2025 ~ May. 28, 2025					

Summary table of SAR measurement results		
SAR test Configuration	The Highest SAR (W/kg)	Distance (mm)
Head SAR	0.81	
Body-worn accessory	1.20	5
Product specific(wireless router)	1.20	5
Simultaneous transmission	1.592	

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 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 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
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
U-NII-5	Voice / Data	5 925 MHz ~ 6 425 MHz
U-NII-6	Voice / Data	6 425 MHz ~ 6 525 MHz
U-NII-7	Voice / Data	6 525 MHz ~ 6 865 MHz
U-NII-8	Voice / Data	6 865 MHz ~ 7 115 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 462 MHz
Bluetooth / LE 5.4	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
WPC	Data	110 kHz ~ 148 kHz
Device Description		
Battery	Main: EB-BF766ABY, Sub: EB-BF767ABY (Manufacture: ATL)	
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900 UMTS BAND 5 LTE Band 2,4,5,12,13,41,66 NR Band n5, n41, n66 NFC	YDL0361M,YDL0376M YDL0379M,YDL0354M
	WLAN 2.4G, 5G, BT	YE10073M, YE10074M
	WLAN 6E	YE10073M, YE10074M
	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 FastConnect 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 or PD_design_target, below the predefined time-averaged power limit (i.e., Plimit for sub-6 radio and WLAN, and input.power.limit for 5G mmW NR), for each characterized technology and band (see SAR Part 0 Test Report for sub 6GHz, PD Part 0 Test Report for 5G mmW NR).

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 in 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 FastConnect 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 in compliance with FCC requirements all the time. DUT contains BDF File configured for the Qualcomm FastConnect TAS algorithm. Only the BT mode of the device did not apply the time averaged SAR algorithm.

The Samsung S.LSI TAS algorithm and Qualcom FastConnect 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 indicator 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 Plim > Pmax			
Plimit corresponding to 1 W/kg (1g)			2.5W/kg(10g) SAR_Design_target			Pmax
SAR Exposure Position			Head (RCV ON)	Open Body (BodyWorn/ Hotspot)	Closed Body (BodyWorn/ Hotspot)	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume			1g	1g	1g	
separation Distance			0 mm	5 mm	5 mm	
Mode	Band	Antenna	RSI=1	RSI=0,2	RSI=3,4	
GSM/GPRS/EDGE	850	A	31.2	21.5	21.5	24.8
GSM/GPRS/EDGE	850	E	18.7	19.5	19.5	24.4
GSM/GPRS/EDGE	1900	B	33.5	19.0	19.0	19.0
UMTS	5	A	23.9	23.0	23.0	25.0
UMTS	5	E	18.5	19.0	19.0	21.0
LTE	2	B	35.0	19.5	19.5	24.5
LTE	2	I	17.0	18.5	18.5	24.5
LTE	66(4)	B	38.2	19.5	19.5	25.2
LTE	66(4)	I	17.5	19.5	19.5	25.0
LTE	12	A	31.1	21.5	21.5	24.0
LTE	12	E	18.0	18.0	18.0	22.0
LTE	13	A	29.7	21.5	21.5	24.0
LTE	13	E	17.5	17.5	17.5	22.0
LTE	5	A	29.6	21.5	21.5	23.0
LTE	5	E	19.5	19.5	19.5	22.0
LTE	41(PC3)	B	37.1	19.5	19.5	22.5
LTE	41(PC3)	I	14.8	17.5	17.5	22.5
NR	n5	A	33.4	22.5	22.5	24.0
NR	n5	E	19.5	20.0	20.0	23.0
NR	n41	B	23.5	19.5	19.5	24.5
NR	n41	I	14.8	17.5	17.5	24.5
NR	n66	B	35.4	19.5	19.5	25.2
NR	n66	I	17.5	19.5	19.5	25.0

Plim values in green indicate Plimit < Pmax			Plim values in grey indicate Plim > Pmax			
Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target						Pmax
SAR Exposure Position			Head (RCV ON)	Open Body (BodyWorn/ Hotspot)	Closed Body (BodyWorn/ Hotspot)	Maximum Tune-up Output Power (Frame Average Power) [dBm]
Averaging volume			1g	1g	1g	
separation Distance			0 mm	5 mm	5 mm	
Mode	Band	Antenna	DSI=1	DSI=0,2	DSI=3,4	
WLAN	2.4 GHz	G	13.5	14.5	14.5	
WLAN	2.4 GHz	H	13.5	14.5	14.5	
WLAN	2.4 GHz	G+H	13.5	14.5	14.5	
WLAN	5 GHz	F	10.5	15.0	15.0	
WLAN	5 GHz	H	10.5	15.0	15.0	
WLAN	5 GHz	F+H	10.5	15.0	15.0	
WLAN	6 GHz	F	10.0	10.0	10.0	
WLAN	6 GHz	H	10.0	10.0	10.0	
WLAN	6 GHz	F+H	10.0	10.0	10.0	
Bluetooth	2.4GHz	G	14.5	23.9	24.6	
Bluetooth	2.4GHz	H	14.5	24.4	26.8	
Bluetooth	2.4GHz	G+H	12.0	17.9	19.1	

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).
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 modes SAR values in this report were scaled to the maximum allowed output power to determine compliance per KDB Publication 447498 D01v06.
4. The NR TDD n41 band of Ant I is switching to the bottom side ant B in a voice call situation.
5. 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	31.0	29.0	28.0	24.5	22.0	21.0	19.0
RSI = 0 (Open Free)	30.7	30.7	27.7	25.9	24.7	24.5	22.0	21.0	19.0
RSI = 1 (Open RCV)	33.0	33.0	31.0	29.0	28.0	24.5	22.0	21.0	19.0
RSI = 2 (Open Hotspot)	-	30.7	27.7	25.9	24.7	24.5	22.0	21.0	19.0
RSI = 3 (Close Free)	30.7	30.7	27.7	25.9	24.7	24.5	22.0	21.0	19.0
RSI = 4 (Close hotspot)	-	30.7	27.7	25.9	24.7	24.5	22.0	21.0	19.0

GSM/GPRS/EDGE 850_Antenna E									
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	32.0	32.0	30.0	28.8	27.6	24.5	22.0	21.0	19.0
RSI = 0 (Open Free)	28.7	28.7	25.7	23.9	22.7	24.5	22.0	21.0	19.0
RSI = 1 (Open RCV)	27.7	27.7	24.7	22.9	21.7	24.5	22.0	21.0	19.0
RSI = 2 (Open Hotspot)	-	28.7	25.7	23.9	22.7	24.5	22.0	21.0	19.0
RSI = 3 (Close Free)	28.7	28.7	25.7	23.9	22.7	24.5	22.0	21.0	19.0
RSI = 4 (Close hotspot)	-	28.7	25.7	23.9	22.7	24.5	22.0	21.0	19.0

GSM/GPRS/EDGE 1900_Antenna B									
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	30.0	30.0	27.8	26.2	25.2	24.5	22.0	21.0	19.0
RSI = 0 (Open Free)	28.2	28.2	25.2	23.4	22.2	24.5	22.0	21.0	19.0
RSI = 1 (Open RCV)	30.0	30.0	27.8	26.2	25.2	24.5	22.0	21.0	19.0
RSI = 2 (Open Hotspot)	-	28.2	25.2	23.4	22.2	24.5	22.0	21.0	19.0
RSI = 3 (Close Free)	28.2	28.2	25.2	23.4	22.2	24.5	22.0	21.0	19.0
RSI = 4 (Close hotspot)	-	28.2	25.2	23.4	22.2	24.5	22.0	21.0	19.0

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
Pmax	25.0	24.0	20.0
RSI = 0 (Open Free)	23.0	22.0	20.0
RSI = 1 (Open RCV)	23.9	22.9	20.0
RSI = 2 (Open Hotspot)	23.0	22.0	20.0
RSI = 3 (Close Free)	23.0	22.0	20.0
RSI = 4 (Close Hotspot)	23.0	22.0	20.0

UMTS Band 5 (850 MHz)_Antenna E			
Power Level	Modulated Average Output Power (dBm)		
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6
Pmax	21.0	20.0	20.0
RSI = 0 (Open Free)	19.0	18.0	18.0
RSI = 1 (Open RCV)	18.5	17.0	17.0
RSI = 2 (Open Hotspot)	19.0	18.0	18.0
RSI = 3 (Close Free)	19.0	18.0	18.0
RSI = 4 (Close Hotspot)	19.0	18.0	18.0

Tolerance: -1.5 dB ~ +1.0 dB

C. LTE Modes

Mode / Band	Antenna	Modulated Average Output Power (dBm)					
		Pmax	RSI = 0 (Open Free)	RSI = 1 (Open RCV)	RSI = 2 (Open hotspot)	RSI = 3 (Closed Free)	RSI = 4 (Closed Hotspot)
LTE Band 12	A	24.0	21.5	24.0	21.5	21.5	21.5
LTE Band 12	E	22.0	18.0	18.0	18.0	18.0	18.0
LTE Band 13	A	24.0	21.5	24.0	21.5	21.5	21.5
LTE Band 13	E	22.0	17.5	17.5	17.5	17.5	17.5
LTE Band 5	A	23.0	21.5	23.0	21.5	21.5	21.5
LTE Band 5	E	22.0	19.5	19.5	19.5	19.5	19.5
LTE Band 66	B	25.2	19.5	25.2	19.5	19.5	19.5
LTE Band 66	I	25.0	19.5	17.5	19.5	19.5	19.5
LTE Band 4	B	25.2	19.5	25.2	19.5	19.5	19.5
LTE Band 4	I	24.5	19.5	17.5	19.5	19.5	19.5
LTE Band 2	B	24.5	19.5	24.5	19.5	19.5	19.5
LTE Band 2	I	24.5	18.5	17.0	18.5	18.5	18.5
LTE Band 41	B	24.5	21.5	24.5	21.5	21.5	21.5
LTE Band 41	I	24.5	19.5	16.8	19.5	19.5	19.5

Tolerance: -1.5 dB ~ +1.0 dB

D. 5G NR SUB 6

Mode / Band	Antenna	Modulated Average Output Power (dBm)					
		Pmax	RSI = 0 (Open Free)	RSI = 1 (Open RCV)	RSI = 2 (Open hotspot)	RSI = 3 (Closed Free)	RSI = 4 (Closed Hotspot)
NR Band n5	A	24.0	22.5	24.0	22.5	22.5	22.5
NR Band n5	E	23.0	20.0	19.5	20.0	20.0	20.0
NR Band n66	B	25.2	19.5	25.2	19.5	19.5	19.5
NR Band n66	I	25.0	19.5	17.5	19.5	19.5	19.5
NR Band n41	B	24.5	19.5	23.5	19.5	19.5	19.5
NR Band n41	I	24.5	17.5	14.8	17.5	17.5	17.5

Tolerance: -1.5 dB ~ +1.0 dB

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

a. Maximum Power

Frequency (BW)	Band	SISO (ANT1)							SISO (ANT2)							MIMO						
		a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be
2.4 GHz (20MHz)			19	17	17	17	17 Ch11.16	17 Ch1.16		19	17	17	17	17 Ch11.16	17 Ch11.16		22	20	20	20	20 Ch11.19	20 Ch11.19
5 GHz (20MHz)	UNII 1	17			17	17	17	17	17			17	17	17	17	20			20	20	20	20
	UNII 2A	17			17	17	17	17	17			17	17	17	17	20			20	20	20	20
	UNII 2C	17			17	17	17	17	17			17	17	17	17	20			20	20	20	20
	UNII 3	17			17	17	17	17	17			17	17	17	17	20			20	20	20	20
	UNII 4	17			17	17	17	17	17			17	17	17	17	20			20	20	20	20
5 GHz (40MHz)	UNII 1				17 Ch38.15	17 Ch38.16	17 Ch.38.14	17 Ch.3.8:14				17 Ch38.15	17 Ch38.16	17 Ch.3.8:14	17 Ch.3.8:14				20 Ch38.18	20 Ch38.19	20 Ch.3.8:17	20 Ch.3.8:17
	UNII 2A				17 Ch62.15	17 Ch62.15	17 Ch.62.16:5	17 Ch.6.2:16.5				17 Ch62.15	17 Ch62.15	17 Ch.6.2:16.5	17 Ch.6.2:16.5				20 Ch62.18	20 Ch62.18	20 Ch.6.2:19.5	20 Ch.6.2:19.5
	UNII 2C				17	17	17 Ch.10.2:16	17 Ch.1.02:16				17	17	17 Ch.1.02:16	17 Ch.1.02:16				20	20	20 Ch.1.02:19	20 Ch.1.02:19
	UNII 3				17	17	17	17				17	17	17	17				20	20	20	20
	UNII 4				17	17	17	17				17	17	17	17				20	20	20	20
5 GHz (80MHz)	UNII 1					17 Ch42.16	17 Ch.42.13:5	17 Ch.4.2:13.5					17 Ch42.16	17 Ch.4.2:13.5	17 Ch.4.2:13.5					20 Ch42.19	20 Ch.4.2:16.5	20 Ch.4.2:16.5
	UNII 2A					17 Ch58.16	17	17					17 Ch58.16	17	17					20 Ch58.19	20	20
	UNII 2C					17 Ch10.6.15	17 Ch.10.6:14.5	17 Ch.1.06:14.5					17 Ch10.6.15	17 Ch.1.06:14.5	17 Ch.1.06:14.5					20 Ch10.6.18	20 Ch.1.06:17.5	20 Ch.1.06:17.5
	UNII 3					17	17	17					17	17	17					20	20	20
	UNII 4					17	17	17					17	17	17					20	20	20
5 GHz (160MHz)	UNII 1/2A					17 Ch50.15	17 Ch.50.15	17 Ch.5.0:15					17 Ch50.15	17 Ch.5.0:15	17 Ch.5.0:15					20 Ch50.18	20 Ch.5.0:18	20 Ch.5.0:18
	UNII 2C					17 Ch11.4.15	17 Ch.11.4:15	17 Ch.1.14:15					17 Ch11.4.15	17 Ch.1.14:15	17 Ch.1.14:15					20 Ch11.4.18	20 Ch.1.14:18	20 Ch.1.14:18
	UNII 3/4					17	17	17					17	17	17					20	20	20
6GHz_LPI (20MHz)	UNII 5	10 Ch.2:8.5					10 Ch.2:8	10 Ch.2:8	10 Ch.2:8.5					10 Ch.2:8	10 Ch.2:8	13 Ch.2:11.5					13 Ch.2:11	13 Ch.2:11

	UNII 6	10					10	10	10					10	10	13					13	13
	UNII 7	10					10	10	10					10	10	13					13	13
	UNII 8	10 Ch.2 33: 6.5					10 Ch.23 3:7.5	10 Ch.2 33: 7.5	10 Ch.2 33: 6.5					10 Ch.2 33: 7.5	10 Ch.2 33: 7.5	13 Ch.2 33: 9.5					13 Ch.2 33: 10.5	13 Ch.2 33: 10.5
6GHz_L PI (40MHz)	UNII 5						12	12						12	12						15	15
	UNII 6						12	12						12	12						15	15
	UNII 7						12	12						12	12						15	15
	UNII 8						12	12						12	12						15	15
6GHz_L PI (80MHz)	UNII 5						15	15						15	15						18	18
	UNII 6						15	15						15	15						18	18
	UNII 7						15	15						15	15						18	18
	UNII 8						15	15						15	15						18	18
6GHz_L PI (160MHz)	UNII 5						14	14						14	14						17	17
	UNII 6						14	14						14	14						17	17
	UNII 7						14	14						14	14						17	17
	UNII 8						14	14						14	14						17	17
6GHz_L PI (320MHz)	UNII 5						14							14								17
	UNII 6						14							14								17
	UNII 7						14							14								17
	UNII 8						14							14								17
6GHz_S P (20MHz)	UNII 5	16 Ch.2. 8.5					16 Ch.2.8	16 Ch.2. 8	16 Ch.2. 8.5					16 Ch.2. 8	16 Ch.2. 8	19 Ch.2. 11.5					19 Ch.2. 11	19 Ch.2. 11
	UNII 7	16					16	16	16					16	16	19					19	19
6GHz_S P (40MHz)	UNII 5						16	16						16	16						19	19
	UNII 7						16	16						16	16						19	19
6GHz_S P (80MHz)	UNII 5						15	15						15	15						18	18
	UNII 7						15	15						15	15						18	18
6GHz_S P	UNII 5						14	14						14	14						17	17

(160MHz)	UNII 7						14	14						14	14							17	17
6GHz_S P	UNII 5							14							14								17
(320MHz)																							
6GHz_V LP (20MHz)	UNII 5	5					5	5	5					5	5	8						8	8
	UNII 6	5					5	5	5					5	5	8						8	8
	UNII 7	5					5	5	5					5	5	8						8	8
	UNII 8	5					5	5	5					5	5	8						8	8
6GHz_V LP (40MHz)	UNII 5						8	8						8	8							11	11
	UNII 6						8	8						8	8							11	11
	UNII 7						8	8						8	8							11	11
	UNII 8						8	8						8	8							11	11
6GHz_V LP (80MHz)	UNII 5						11	11						11	11							14	14
	UNII 6						11	11						11	11							14	14
	UNII 7						11	11						11	11							14	14
	UNII 8						11	11						11	11							14	14
6GHz_V LP (160MHz)	UNII 5						11	11						11	11							14	14
	UNII 6						11	11						11	11							14	14
	UNII 7						11	11						11	11							14	14
	UNII 8						11	11						11	11							14	14
6GHz_V LP (320MHz)	UNII 5							11							11								14
	UNII 6							11							11								14
	UNII 7							11							11								14
	UNII 8							11							11								14

(Upper Tolerance: target +1.0 dB)

b. Reduced Power – Plimit(Head)

Frequency (BW)	Band	SISO (ANT1)						SISO (ANT2)						MIMO										
		a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be		
2.4 GHz (20MHz)			13.5	13.5	13.5	13.5	13.5	13.5		13.5	13.5	13.5	13.5	13.5	13.5		16.5	16.5			16.5	16.5	16.5	16.5
5 GHz (20MHz)	UNII	10.5			10.5	10.5	10.5	10.5	10.5			10.5	10.5	10.5	10.5	13.5			13.5	13.5	13.5	13.5		
	UNII	10.5			10.5	10.5	10.5	10.5	10.5			10.5	10.5	10.5	10.5	13.5			13.5	13.5	13.5	13.5		
	UNII	10.5			10.5	10.5	10.5	10.5	10.5			10.5	10.5	10.5	10.5	13.5			13.5	13.5	13.5	13.5		
	UNII	10.5			10.5	10.5	10.5	10.5	10.5			10.5	10.5	10.5	10.5	13.5			13.5	13.5	13.5	13.5		
	UNII	10.5			10.5	10.5	10.5	10.5	10.5			10.5	10.5	10.5	10.5	13.5			13.5	13.5	13.5	13.5		
5 GHz (40MHz)	UNII				10.5	10.5	10.5	10.5				10.5	10.5	10.5	10.5				13.5	13.5	13.5	13.5		
	UNII				10.5	10.5	10.5	10.5				10.5	10.5	10.5	10.5				13.5	13.5	13.5	13.5		
	UNII				10.5	10.5	10.5	10.5				10.5	10.5	10.5	10.5				13.5	13.5	13.5	13.5		
	UNII				10.5	10.5	10.5	10.5				10.5	10.5	10.5	10.5				13.5	13.5	13.5	13.5		
	UNII				10.5	10.5	10.5	10.5				10.5	10.5	10.5	10.5				13.5	13.5	13.5	13.5		
5 GHz (80MHz)	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
5 GHz (160MHz)	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
	UNII					10.5	10.5	10.5					10.5	10.5	10.5					13.5	13.5	13.5	13.5	
6GHz_LPI (20MHz)	UNII 5	10 Ch.2 : 8.5					10 Ch.2 : 8	10 Ch.2 : 8	10 Ch.2 : 8.5					10 Ch.2 : 8	10 Ch.2 : 8	13 Ch.2 : 11.5					13 Ch.2 : 11	13 Ch.2 : 11		
	UNII 6	10					10	10	10					10	10	13					13	13		
	UNII 7	10					10	10	10					10	10	13					13	13		
	UNII 8	10 Ch.2 33 : 6.5					10 Ch.2 33 : 7.5	10 Ch.2 33 : 7.5	10 Ch.2 33 : 6.5					10 Ch.2 33 : 7.5	10 Ch.2 33 : 7.5	13 Ch.2 33 : 9.5					13 Ch.2 33 : 10.5	13 Ch.2 33 : 10.5		
6GHz_LPI (40MHz)	UNII						10	10						10	10						13	13		
	UNII						10	10						10	10						13	13		
	UNII						10	10						10	10						13	13		
	UNII						10	10						10	10						13	13		
6GHz_LPI (80MHz)	UNII						9	9						9	9						12	12		
	UNII						9	9						9	9						12	12		
	UNII						9	9						9	9						12	12		
	UNII						9	9						9	9						12	12		
6GHz_LPI (160MHz)	UNII						9	9						9	9						12	12		
	UNII						9	9						9	9						12	12		
	UNII 7						9	9						9	9						12	12		
	UNII 8						9	9						9	9						12	12		
6GHz_LPI (320MHz)	UNII 5							9							9							12		
	UNII 6							9							9							12		
	UNII 7							9							9							12		
	UNII 8							9							9							12		
6GHz_SP (20MHz)	UNII 5	10 Ch2. 8.5					10 Ch2. 8	10 Ch2. 8	10 Ch2. 8.5					10 Ch2. 8	10 Ch2. 8	13 Ch2. 11.5					13 Ch2. 11	13 Ch2. 11		

	UNII 7	10					10	10	10					10	10	13					13	13
6GHz_SP (40MHz)	UNII 5						10	10						10	10						13	13
	UNII 7						10	10						10	10						13	13
6GHz_SP (80MHz)	UNII 5						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
6GHz_SP (160MHz)	UNII 5						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
6GHz_SP (320MHz)	UNII 5							9							9							12
6GHz_VLP (20MHz)	UNII 5	5					5	5	5					5	5	8					8	8
	UNII 6	5					5	5	5					5	5	8					8	8
	UNII 7	5					5	5	5					5	5	8					8	8
	UNII 8	5					5	5	5					5	5	8					8	8
6GHz_VLP (40MHz)	UNII 5						8	8						8	8						11	11
	UNII 6						8	8						8	8						11	11
	UNII 7						8	8						8	8						11	11
	UNII 8						8	8						8	8						11	11
6GHz_VLP (80MHz)	UNII 5						9	9						9	9						12	12
	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
6GHz_VLP (160MHz)	UNII 5						9	9						9	9						12	12
	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
6GHz_VLP (320MHz)	UNII 5							9							9							12
	UNII 6							9							9							12

	UNII 7							9							9							12
	UNII 8							9							9							12

(Upper Tolerance: target +1.0 dB)

c. Reduced Power – Plimit(Body)

Frequency (BW)	Band	SISO (ANT 1)							SISO (ANT2)							MIMO						
		a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be	a	b	g	n	ac	ax (SU)	be
2.4 GHz (20MHz)			14.5	14.5	14.5	14.5	14.5	14.5		14.5	14.5	14.5	14.5	14.5	14.5		17.5	17.5	17.5	17.5	17.5	17.5
5 GHz (20MHz)	UNII 1	15.0			15.0	15.0	15.0	15.0	15.0			15.0	15.0	15.0	15.0	18.0			18.0	18.0	18.0	18.0
	UNII 2A	15.0			15.0	15.0	15.0	15.0	15.0			15.0	15.0	15.0	15.0	18.0			18.0	18.0	18.0	18.0
	UNII 2C	15.0			15.0	15.0	15.0	15.0	15.0			15.0	15.0	15.0	15.0	18.0			18.0	18.0	18.0	18.0
	UNII 3	15.0			15.0	15.0	15.0	15.0	15.0			15.0	15.0	15.0	15.0	18.0			18.0	18.0	18.0	18.0
	UNII 4	15.0			15.0	15.0	15.0	15.0	15.0			15.0	15.0	15.0	15.0	18.0			18.0	18.0	18.0	18.0
5 GHz (40MHz)	UNII 1				15.0	15.0	15.0 Ch.38 :14	15.0 Ch.38 :14				15.0	15.0	15.0 Ch.38 :14	15.0 Ch.38 :14				18.0	18.0	18.0 Ch.38:17	18.0 Ch.38 :17
	UNII 2A				15.0	15.0	15.0	15.0				15.0	15.0	15.0	15.0				18.0	18.0	18.0	18.0
	UNII 2C				15.0	15.0	15.0	15.0				15.0	15.0	15.0	15.0				18.0	18.0	18.0	18.0
	UNII 3				15.0	15.0	15.0	15.0				15.0	15.0	15.0	15.0				18.0	18.0	18.0	18.0
	UNII 4				15.0	15.0	15.0	15.0				15.0	15.0	15.0	15.0				18.0	18.0	18.0	18.0
5 GHz (80MHz)	UNII 1					15.0	15.0 Ch.42:13.5	15.0 Ch.42:13.5						15.0	15.0 Ch.42:13.5	15.0 Ch.42:13.5				18.0	18.0 Ch.42:16.5	18.0 Ch.42:16.5
	UNII 2A					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
	UNII 2C					15.0	15.0 Ch.106:14.5	15.0 Ch.106:14.5						15.0	15.0 Ch.106:14.5	15.0 Ch.106:14.5				18.0	18.0 Ch.106:17.5	18.0 Ch.106:17.5
	UNII 3					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
	UNII 4					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
5 GHz (160MHz)	UNII 1/2A					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
	UNII 2C					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
	UNII 3/4					15.0	15.0	15.0						15.0	15.0	15.0				18.0	18.0	18.0
6GHz_L PI (20MHz)	UNII 5	10 Ch.2 :8.5					10 Ch.2 :8	10 Ch.2 :8	10 Ch.2 :8.5					10 Ch.2 :8	10 Ch.2 :8	13 Ch.2 :11.5					13 Ch.2 :11	13 Ch.2 :11
	UNII 6	10					10	10	10					10	10	13					13	13
	UNII 7	10					10	10	10					10	10	13					13	13
	UNII 8	10 Ch.233 :6.5					10 Ch.233 :7.5	10 Ch.233 :7.5	10 Ch.233 :6.5					10 Ch.233 :7.5	10 Ch.233 :7.5	13 Ch.233 :9.5					13 Ch.233 :10.5	13 Ch.233 :10.5
6GHz_L PI (40MHz)	UNII 5						10	10						10	10						13	13
	UNII 6						10	10						10	10						13	13
	UNII 7						10	10						10	10						13	13
	UNII 8						10	10						10	10						13	13
6GHz_L PI (80MHz)	UNII 5						9	9						9	9						12	12
	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
	UNII 5						9	9						9	9						12	12

6GHz_L PI (160MHz)	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
6GHz_L PI (320MHz)	UNII 5							9							9							12
	UNII 6							9							9							12
	UNII 7							9							9							12
	UNII 8							9							9							12
6GHz_S P (20MHz)	UNII 5	10 Ch2. 8.5					10 Ch2. 8	10 Ch2. 8	10 Ch2. 8.5					10 Ch2. 8	10 Ch2. 8	13 Ch2. 11.5					13 Ch2. 11	13 Ch2. 11
	UNII 7	10					10	10	10					10	10	13					13	13
6GHz_S P (40MHz)	UNII 5						10	10						10	10						13	13
	UNII 7						10	10						10	10						13	13
6GHz_S P (80MHz)	UNII 5						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
6GHz_S P (160MHz)	UNII 5						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
6GHz_S P (320MHz)	UNII 5							9							9							12
6GHz_V LP (20MHz)	UNII 5	5					5	5	5					5	5	8					8	8
	UNII 6	5					5	5	5					5	5	8					8	8
	UNII 7	5					5	5	5					5	5	8					8	8
	UNII 8	5					5	5	5					5	5	8					8	8
6GHz_V LP (40MHz)	UNII 5						8	8						8	8						11	11
	UNII 6						8	8						8	8						11	11
	UNII 7						8	8						8	8						11	11
	UNII 8						8	8						8	8						11	11
6GHz_V LP (80MHz)	UNII 5						9	9						9	9						12	12
	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
6GHz_V LP (160MHz)	UNII 5						9	9						9	9						12	12
	UNII 6						9	9						9	9						12	12
	UNII 7						9	9						9	9						12	12
	UNII 8						9	9						9	9						12	12
6GHz_V LP (320MHz)	UNII 5							9							9							12
	UNII 6							9							9							12
	UNII 7							9							9							12
	UNII 8							9							9							12

(Upper Tolerance: target +1.0 dB)

d. 11ax/be RU Tx Power Tables

Tones	SISO (ANT1 & ANT2)																			
	2.4G 20M Hz	5G 20M Hz	5G 40M Hz	5G 80M Hz	5G 160M Hz	6G_L PI 20M Hz	6G_L PI 40M Hz	6G_L PI 80M Hz	6G_L PI 160M Hz	6G_L PI 320M Hz	6G_S P 20M Hz	6G_S P 40M Hz	6G_S P 80M Hz	6G_S P 160M Hz	6G_S P 320M Hz	6G_V LP 20M Hz	6G_V LP 40M Hz	6G_V LP 80M Hz	6G_V LP 160M Hz	6G_V LP 320M Hz
26T	13	9	9	9	9	-1	-1	-1	-1	-1	13 Ch2. 1.5	13	13	13	13	-5	-5	-5	-5	-5
52T	14	12	12	12	12	2	2	2	2	2	13 Ch2. 6	13	13	13	13	-2	-2	-2	-2	-2
106T	16	15	15	15	15	5	5	5	5	5	13 Ch2. 8.5	13	13	13	13	1	1	1	1	1
242T	17	17	17	17	17	10	10	10	10	10	16 Ch2. 11	16	16	16	16	5	5	5	5	5
484T			17 Ch.3 8:14 Ch.6 2:15 Ch.1 02:16	17 Ch.4 2:14 Ch.5 8:16 Ch.1 14:15 06:15	17 Ch.5 0:14 Ch.1 14:15		12	12	12	12		16	16	16	16		8	8	8	8
996T				17 Ch.4 2:14 Ch.5 8:15 Ch.1 06:14	17 Ch.5 0:13 5 Ch.1 14:15			15	15	15			15	15	15			11	11	11
2*996T					17 Ch.5 0:14 Ch.1 14:14				14	14				14	14				11	11
4*996T										14					14					11

(Upper Tolerance: target +1.0 dB)

Tones	MIMO (ALL)																			
	2.4G 20M Hz	5G 20M Hz	5G 40M Hz	5G 80M Hz	5G 160 MHz	6G_ LPI 20M Hz	6G_ LPI 40M Hz	6G_ LPI 80M Hz	6G_ LPI 160 MHz	6G_ LPI 320 MHz	6G_ SP 20M Hz	6G_ SP 40M Hz	6G_ SP 80M Hz	6G_ SP 160 MHz	6G_ SP 320 MHz	6G_ VLP 20M Hz	6G_ VLP 40M Hz	6G_ VLP 80M Hz	6G_ VLP 160 MHz	6G_ VLP 320 MHz
26T	16	12	12	12	12	2	2	2	2	2	16 Ch2. 4.5	16	16	16	16	-2	-2	-2	-2	-2
52T	17	15	15	15	15	5	5	5	5	5	16 Ch2. 9	16	16	16	16	1	1	1	1	1
106T	19	18	18	18	18	8	8	8	8	8	16 Ch2. 11.5	16	16	16	16	4	4	4	4	4
242T	20	20	20	20	20	13	13	13	13	13	19 Ch2. 14	19	19	19	19	8	8	8	8	8
484T			20 Ch.3 8:17 Ch.6 2:18 Ch.1 02:1 9	20 Ch.4 2:17 Ch.5 8:19 Ch.1 06:1 8	20 Ch.5 0:17 Ch.1 14:1 8		15	15	15	15		19	19	19	19		11	11	11	11
996T				20 Ch.4 2:17 Ch.5 8:18 Ch.1 06:1 7	20 Ch.5 0:16 .5 Ch.1 14:1 8			18	18	18			18	18	18			14	14	14
2*996T					20 Ch.5 0:17 Ch.1 14:1 7				17	17				17	17				14	14
4*996T										17					17					14

(Upper Tolerance: target +1.0 dB)

e. Reduced Power 11ax/be RU Tx Power Tables – Plimit (Head)

Ton es	SISO (ANT1 & ANT2)																			
	2.4 G 20 MH z	5G 20 MH z	5G 40 MH z	5G 80 MH z	5G 160 MHz	6G_ LPI 20M Hz	6G_ LPI 40M Hz	6G_ LPI 80M Hz	6G_ LPI 160 MHz	6G_ LPI 320 MHz	6G_ SP 20 MH z	6G_ SP 40 MH z	6G_ SP 80 MH z	6G_ SP 160 MHz	6G_ SP 320 MHz	6G_ VLP 20M Hz	6G_ VLP 40M Hz	6G_ VLP 80M Hz	6G_ VLP 160 MHz	6G_ VLP 320 MHz
26T	13	9	9	9	9	-1	-1	-1	-1	-1	10 Ch2 .1.5	10	9	9	9	-5	-5	-5	-5	-5
52T	13.5	10.5	10.5	10.5	10.5	2	2	2	2	2	10 Ch2 .6	10	9	9	9	-2	-2	-2	-2	-2
106 T	13.5	10.5	10.5	10.5	10.5	5	5	5	5	5	10 Ch2 .8.5	10	9	9	9	1	1	1	1	1
242 T	13.5	10.5	10.5	10.5	10.5	10	10	9	9	9	10	10	9	9	19	5	5	5	5	5
484 T			10.5	10.5	10.5		10	9	9	9		10	9	9	9		8	8	8	8
996 T				10.5	10.5			9	9	9			9	9	9			9	9	9
2*9 96T					10.5				9	9				9	9				9	9
4*9 96T										9					9					9

Tones	MIMO (ALL)																			
	2.4G 20M Hz	5G 20M Hz	5G 40M Hz	5G 80M Hz	5G 160 MHz	6G_ LPI 20M Hz	6G_ LPI 40M Hz	6G_ LPI 80M Hz	6G_ LPI 160 MHz	6G_ LPI 320 MHz	6G_ SP 20M Hz	6G_ SP 40M Hz	6G_ SP 80M Hz	6G_ SP 160 MHz	6G_ SP 320 MHz	6G_ VLP 20M Hz	6G_ VLP 40M Hz	6G_ VLP 80M Hz	6G_ VLP 160 MHz	6G_ VLP 320 MHz
26T	16	12	12	12	12	2	2	2	2	2	13 Ch2. 4.5	13	12	12	12	-2	-2	-2	-2	-2
52T	16.5	13.5	13.5	13.5	13.5	5	5	5	5	5	13 Ch2. 9	13	12	12	12	1	1	1	1	1
106T	16.5	13.5	13.5	13.5	13.5	8	8	8	8	8	13 Ch2. 11.5	13	12	12	12	4	4	4	4	4
242T	16.5	13.5	13.5	13.5	13.5	13	13	12	12	12	13	13	12	12	12	8	8	8	8	8
484T			13.5	13.5	13.5		13	12	12	12		13	12	12	12		11	11	11	11
996T				13.5	13.5			12	12	12			12	12	12			12	12	12
2*996T					13.5				12	12				12	12				12	12
4*996T										12					12					12

(Upper Tolerance: target +1.0 dB)

f. Reduced Power 11ax/be RU Tx Power Tables – Plimit (Body)

Tones	SISO (ANT1 & ANT2)																			
	2.4G 20M Hz	5G 20M Hz	5G 40M Hz	5G 80M Hz	5G 160 MHz	6G_ LPI 20M Hz	6G_ LPI 40M Hz	6G_ LPI 80M Hz	6G_ LPI 160 MHz	6G_ LPI 320 MHz	6G_ SP 20M Hz	6G_ SP 40M Hz	6G_ SP 80M Hz	6G_ SP 160 MHz	6G_ SP 320 MHz	6G_ VLP 20M Hz	6G_ VLP 40M Hz	6G_ VLP 80M Hz	6G_ VLP 160 MHz	6G_ VLP 320 MHz
26T	13	9	9	9	9	-1	-1	-1	-1	-1	10 Ch2. 1.5	10	9	9	9	-5	-5	-5	-5	-5
52T	14	12	12	12	12	2	2	2	2	2	10 Ch2. 6	10	9	9	9	-2	-2	-2	-2	-2
106T	14.5	15	15	15	15	5	5	5	5	5	10 Ch2. 8.5	10	9	9	9	1	1	1	1	1
242T	14.5	15.0	15.0	15.0	15.0	10	10	9	9	9	10	10	9	9	9	5	5	5	5	5
484T			15.0 Ch.38 :14	15.0 Ch.42 :14	15.0 Ch.50: 14		10	9	9	9		10	9	9	9		8	8	8	8
996T				15.0 Ch.42 :14	15.0 Ch.50: 13			9	9	9			9	9	9			9	9	9
2*996T					15.0 Ch.50: 14				9	9				9	9				9	9
4*996T										9					9					9

Tones	MIMO (ALL)																			
	2.4G 20M Hz	5G 20M Hz	5G 40M Hz	5G 80M Hz	5G 160 MHz	6G_ LPI 20M Hz	6G_ LPI 40M Hz	6G_ LPI 80M Hz	6G_ LPI 160 MHz	6G_ LPI 320 MHz	6G_ SP 20M Hz	6G_ SP 40M Hz	6G_ SP 80M MHz	6G_ SP 160 MHz	6G_ SP 320 MHz	6G_ VLP 20M Hz	6G_ VLP 40M Hz	6G_ VLP 80M Hz	6G_ VLP 160 MHz	6G_ VLP 320 MHz
26T	16	12	12	12	12	2	2	2	2	2	13 Ch2. 4.5	13	12	12	12	-2	-2	-2	-2	-2
52T	17	15	15	15	15	5	5	5	5	5	13 Ch2. 9	13	12	12	12	1	1	1	1	1
106T	17.5	18	18	18	18	8	8	8	8	8	13 Ch2. 11.5	13	12	12	12	4	4	4	4	4
242T	17.5	18.0	18.0	18.0	18.0	13	13	12	12	12	13	13	12	12	12	8	8	8	8	8
484T			18.0 Ch.38 :17	18.0 Ch.42 :17	18.0 Ch.50: 17		13	12	12	12		13	12	12	12		11	11	11	11
996T				18.0 Ch.42 :17	18.0 Ch.50: 16			12	12	12			12	12	12			12	12	12
2*996T					18.0 Ch.50: 17				12	12				12	12				12	12
4*996T										12					12					12

(Upper Tolerance: target +1.0 dB)

4.4.1.3 Bluetooth output power

a. Bluetooth Maximum Output Power in Conducted Mode

Mode	ANT1	ANT2	Dual Tx
Bluetooth(1Mbps)(in dBm)	18.5	18.5	17.0
Bluetooth(EDR)(in dBm)	15.5	15.5	15.5
Bluetooth(LE,1M/2M)(in dBm)	16.5	16.5	16.5
Bluetooth(LE,125k/500k)(in dBm)	9.0	9.0	-

(Upper Tolerance: target +1.0 dB)

b. Bluetooth Reduced RCV Output Power in Conducted Mode

Mode	ANT1	ANT2	Dual Tx
Bluetooth(1Mbps)(in dBm)	14.5	14.5	15.0
Bluetooth(EDR)(in dBm)	13.0	13.0	15.0
Bluetooth(LE,1M/2M)(in dBm)	13.5	13.5	13.5
Bluetooth(LE,125k/500k)(in dBm)	9.0	9.0	-

(Upper Tolerance: target +1.0 dB)

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 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 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)	

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 13				
HPUE Power Class		N/A				
Modulations Supported in UL		QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3		Yes				
A-MPR disabled for SAR Testing.		Yes				
LTE Carrier Aggregation		This device supports Inter-Band & Intra-Band DL-link Carrier aggregations and intra-Band UL-link Carrier aggregations.				
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
	NR TDD Band n41
	NR FDD Band n66
Channel Bandwidths	NR FDD Band n5
	NR TDD Band n41
	NR FDD Band n66

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)	2639.01(527802)	2 685(537000)
	15 MHz	2 503.5(500700)	2 548.26(509652)	2 592.99(518598)	2637.75(527550)	2 682.51(536502)
	20 MHz	2 506.02(501204)	2 549.49(509898)	2 592.99(518598)	2636.49(527298)	2 679.99(535998)
	25 MHz	2 508.51(501702)	2 550.75(510150)	2 592.99(518598)	2635.23(527046)	2 677.50(535500)
	30 MHz	2 511(502200)	2 552.01(510402)	2 592.99(518598)	2634(526800)	2 674.98(534996)
	40 MHz	2 516.01(503202)	2 567.34(513468)		2618.67(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)

Item.	Description
NR FDD Band n5/n66 SCS	15 kHz
NR TDD Band n41 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 except n5, n66 supported to NSA and SA Connectivity. N5, n66 is supported only NSA 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 n5 (Cell)	LTE Band 2/4/66
LTE Anchor Bands for NR Band n41	LTE Band 66
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 2/5/13

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.

◆ Folder Open

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
MAIN1 [Ant A]	GSM/GPRS/EDGE 850	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	GSM/GPRS/EDGE 850	Yes	Yes	Yes	No	No	Yes
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
SUB1 [Ant E]	UMTS Band 5	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	LTE FDD Band 2 (PCS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 2 (PCS)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	LTE FDD Band 4 (AWS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 4 (AWS)	Yes	Yes	No	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 5	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 5	Yes	Yes	Yes	No	No	Yes
MAIN1 [Ant A]	LTE FDD Band 12	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 12	Yes	Yes	Yes	No	No	Yes
MAIN1 [Ant A]	LTE FDD Band 13	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 13	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE TDD Band 41 (PC3)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 66 (AWS)	Yes	Yes	No	Yes	No	Yes
MAIN1 [Ant A]	NR FDD Band n5	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	NR FDD Band n5	Yes	Yes	Yes	No	No	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR TDD Band n41 (PC3)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	NR FDD Band n66	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR FDD Band n66	Yes	Yes	No	Yes	No	Yes
SUB3 [Ant G] WIFI 1	2.4 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H] WIFI2	2.4 GHz WLAN	Yes	Yes	No	Yes	No	Yes
SUB3 [Ant G] BT 1	Bluetooth	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H] BT 2	Bluetooth	Yes	Yes	No	Yes	No	Yes
SUB2 [Ant F] WIFI 1	5 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H] WIFI2	5 GHz WLAN	Yes	Yes	No	Yes	No	Yes
SUB2 [Ant F] WIFI 1	6 GHz WLAN	Yes	Yes	Yes	No	No	Yes
SUB4 [Ant H] WIFI2	6 GHz WLAN	Yes	Yes	No	Yes	No	Yes
NFC Ant	NFC	Yes	Yes	Yes	Yes	Yes	No

◆ Folder Close

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
MAIN1 [Ant A]	GSM/GPRS/EDGE 850	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	GSM/GPRS/EDGE 850	Yes	Yes	Yes	No	Yes	Yes
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
SUB1 [Ant E]	UMTS Band 5	Yes	Yes	Yes	No	Yes	Yes
MAIN2 [Ant B]	LTE FDD Band 2 (PCS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
MAIN2 [Ant B]	LTE FDD Band 4 (AWS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 4 (AWS)	Yes	Yes	No	Yes	Yes	Yes
MAIN1 [Ant A]	LTE FDD Band 5	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 5	Yes	Yes	Yes	No	Yes	Yes
MAIN1 [Ant A]	LTE FDD Band 12	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 12	Yes	Yes	Yes	No	Yes	Yes
MAIN1 [Ant A]	LTE FDD Band 13	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	LTE FDD Band 13	Yes	Yes	Yes	No	Yes	Yes
MAIN2 [Ant B]	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE TDD Band 41 (PC3)	Yes	Yes	No	Yes	Yes	Yes
MAIN2 [Ant B]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	LTE FDD Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
MAIN1 [Ant A]	NR FDD Band n5	Yes	Yes	No	Yes	Yes	No
SUB1 [Ant E]	NR FDD Band n5	Yes	Yes	Yes	No	Yes	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR TDD Band n41 (PC3)	Yes	Yes	No	Yes	Yes	Yes
MAIN2 [Ant B]	NR FDD Band n66	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR FDD Band n66	Yes	Yes	No	Yes	Yes	Yes
SUB3 [Ant G] WIFI 1	2.4 GHz WLAN	Yes	Yes	Yes	No	Yes	No
SUB4 [Ant H] WIFI2	2.4 GHz WLAN	Yes	Yes	No	Yes	Yes	No
SUB3 [Ant G] BT 1	Bluetooth	Yes	Yes	Yes	No	Yes	No
SUB4 [Ant H] BT 2	Bluetooth	Yes	Yes	No	Yes	Yes	No
SUB2 [Ant F] WIFI 1	5 GHz WLAN	Yes	Yes	Yes	No	Yes	No
SUB4 [Ant H] WIFI2	5 GHz WLAN	Yes	Yes	No	Yes	Yes	No
SUB2 [Ant F] WIFI 1	6 GHz WLAN	Yes	Yes	Yes	No	Yes	No
SUB4 [Ant H] WIFI2	6 GHz WLAN	Yes	Yes	No	Yes	Yes	No

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

- Note: All test configurations are based on front view position.

4.8 Near Field Communications (NFC) Antenna

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

4.9 SAR Summation Scenario

According to FCC KDB 447498 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.

Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet
GSM voice + 2.4GHz Bluetooth SISO/MIMO	Yes [^]	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
GSM voice + 5GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
GSM voice + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI MIMO	Yes	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth SISO/MIMO + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth SISO/MIMO + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2	Yes [^]	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
GSM voice + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth Ant.1	Yes [^]	Yes	Yes [^]	Yes
UMTS + 2.4GHz Bluetooth Ant.2/Dual	Yes [^]	Yes	N/A	Yes
UMTS + 2.4GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
UMTS + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
UMTS + 6GHz WI-FI MIMO SISO/MIMO	Yes	Yes	N/A	Yes
UMTS + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
UMTS + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth Ant.1 + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	Yes [^]	Yes
UMTS + 2.4GHz Bluetooth Ant.2/Dual + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth Ant.1+ 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth Ant.2/Dual + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
UMTS + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2	Yes [^]	Yes	Yes [^]	Yes
UMTS + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	Yes [^]	Yes
UMTS + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1	Yes [^]	Yes	Yes [^]	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual	Yes [^]	Yes	N/A	Yes
LTE + 2.4GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
LTE + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
LTE + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
LTE + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
LTE + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	Yes [^]	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1 + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual + 6GHz WI-FI SISO/MIMO	Yes [^]	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2	Yes [^]	Yes	Yes [^]	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO	Yes [^]	Yes	Yes [^]	Yes

Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
LTE + 5G NR	Yes	Yes	Yes	Yes
LTE + 2.4GHz Bluetooth Ant.1 + 5G NR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual + 5G NR	Yes^	Yes	N/A	Yes
LTE + 2.4GHz WI-FI SISO/MIMO + 5G NR	Yes	Yes	Yes	Yes
LTE + 5GHz WI-FI SISO/MIMO + 5G NR	Yes	Yes	Yes	Yes
LTE + 6GHz WI-FI SISO/MIMO + 5G NR	Yes	Yes	N/A	Yes
LTE + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI SISO/MIMO + 5G NR	Yes	Yes	Yes	Yes
LTE + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI SISO/MIMO + 5G NR	Yes	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1 + 5GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual + 5GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1 + 6GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.2/Dual + 6GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	N/A	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5G NR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	Yes^	Yes
LTE + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO + 5G NR	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.2/Dual	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
GPRS/EDGE Data + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1 + 5GHz WI-FI SISO/MIMO	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.2/Dual + 5GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1 + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.2/Dual + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO	Yes^	Yes	Yes^	Yes
GPRS/EDGE Data + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
5G NR + 2.4GHz Bluetooth Ant.1	Yes^	Yes	Yes^	Yes
5G NR + 2.4GHz Bluetooth Ant.2/Dual	Yes^	Yes	N/A	Yes
5G NR + 2.4GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
5G NR + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
5G NR + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
5G NR + 2.4GHz WI-FI SISO/MIMO + 5GHz WI-FI SISO/MIMO	Yes	Yes	Yes	Yes
5G NR + 2.4GHz WI-FI SISO/MIMO + 6GHz WI-FI SISO/MIMO	Yes	Yes	N/A	Yes
5G NR + 2.4GHz Bluetooth Ant.1+ 5GHz WI-FI SISO/MIMO	Yes^	Yes	Yes^	Yes
5G NR + 2.4GHz Bluetooth Ant.2/Dual+ 5GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
5G NR + 2.4GHz Bluetooth Ant.1 + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
5G NR + 2.4GHz Bluetooth Ant.2/Dual + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes
5G NR + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2	Yes^	Yes	Yes^	Yes
5G NR + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 5GHz WI-FI SISO/MIMO	Yes^	Yes	Yes^	Yes
5G NR + 2.4GHz Bluetooth Ant.1+ 2.4GHz WI-FI Ant 2 + 6GHz WI-FI SISO/MIMO	Yes^	Yes	N/A	Yes

Note:

1. 2.4GHz WLAN and 2.4GHz Bluetooth share the same antenna path. So, this DUT can only transmit together 2.4GHz WLAN Ant.2 and Bluetooth Ant.1.
2. UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
3. VoIP is supported in GPRS/EDGE
4. The highest reported SAR for each exposure condition is used for SAR summation purpose.
5. Wi-Fi Hotspot is supported for 2.4 GHz/UNII-3 of 5 GHz WLAN.
6. * Pre-installed VOIP applications are considered
7. 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.
8. This device supports VoLTE/ VoWiFi.
9. LTE + 5G NR FR1 Scenarios are supported NSA and SA Connectivity.
10. NFC was evaluated for phablet based on expected usage conditions.

4.10 SAR Test Considerations

4.9.1 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/be with the following features:

- a) Up to 160 MHz Bandwidth only for 5/6 GHz
- b) Up to 320 MHz Bandwidth only for 6 GHz
- c) Up to 20 MHz Bandwidth only for 2.4 GHz
- d) 2Tx antenna output
- e) TDWR and Band gap channels are supported for 5 GHz
- f) MU-MIMO UL Operations are not supported

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

4.9.2 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 4 (1 712.4 MHz ~ 1 752.6MHz) is covered by LTE Band 66(1 712.5 MHz ~ 1 777.5 MHz) 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 device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

Per FCC KDB 941225 D01v03r01, 12.2 kbps RMC is the primary mode and HSPA (HSUPA/HSDPA with RMC) is the secondary mode.

Per FCC KDB 941225 D01v03r01, The SAR test exclusion is applied to the secondary mode by the following equation.

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

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

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 or Windows 10 or Windows 11 is working with SAR Measurement system DASY4 & 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.

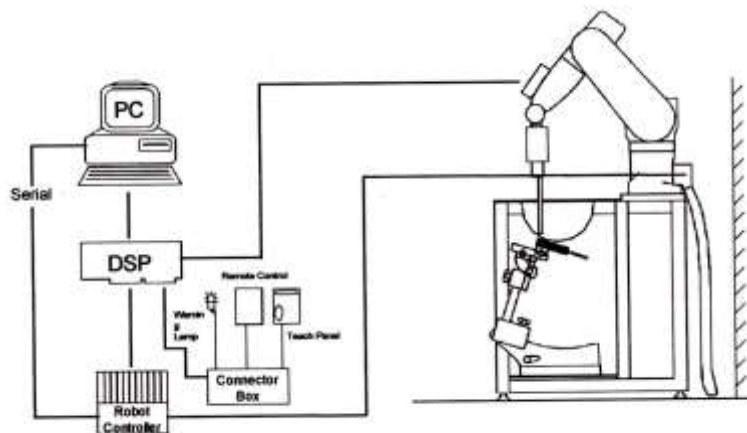


Figure 2. HCT SAR Lab. Test Measurement Set-up

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 KDB 447498 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.

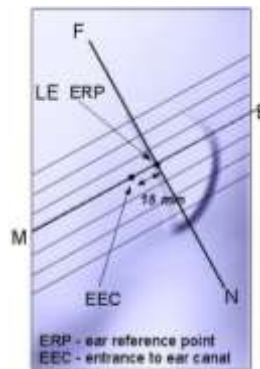


Figure 8-1
Close-up side view of ERP

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

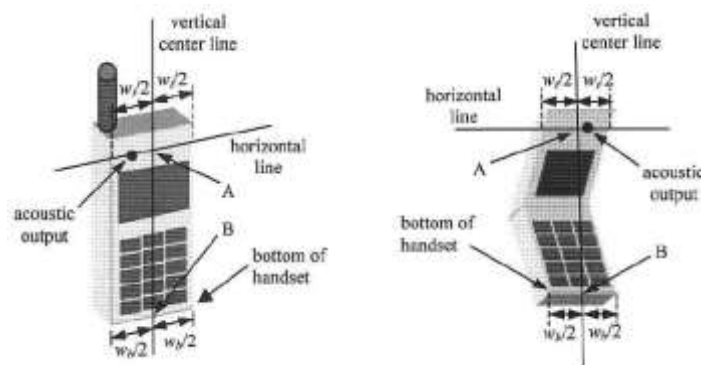


Figure 8-3. Handset vertical and horizontal reference lines

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.

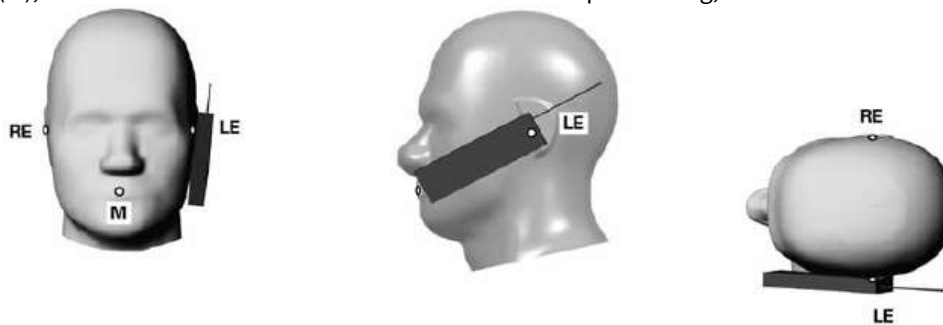


Figure 8.4 Touch/ Touch position of the wireless device

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 Touch for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

10.3 SAR Measurement Conditions for UMTS

10.3.1 Output Power Verification

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

10.3.2 Body SAR measurements

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

10.3.3 SAR Measurements with Rel. 5 HSDPA

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

10.3.4 SAR Measurements with Rel. 6 HSUPA

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

10.3.5 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 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

10.4.1 Spectrum Plots for RB Configurations

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

10.4.2 MPR

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

10.4.3 A-MPR

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

10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

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

determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

10.4.5 Downlink Carrier Aggregation

Conducted power measurements with LTE Carrier aggregation (CA) downlink only active are made in accordance to KDB publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. For every supported combination of downlink only carrier aggregation, additional conducted output Powers are measured with downlink carrier aggregation active for the configuration with highest measured maximum conducted power with the downlink carrier aggregation inactive measured among the channel Bandwidth, modulation and RB combinations in each frequency Band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25dB higher than the average output power with downlink only carrier aggregation inactive.

10.4.7 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	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Calculated Duty Cycle – Extended cyclic prefix in uplink $\times (T_s) \times$ 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

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

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

The frequency range covered by U-NII-2C and U-NII-3 is 380 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

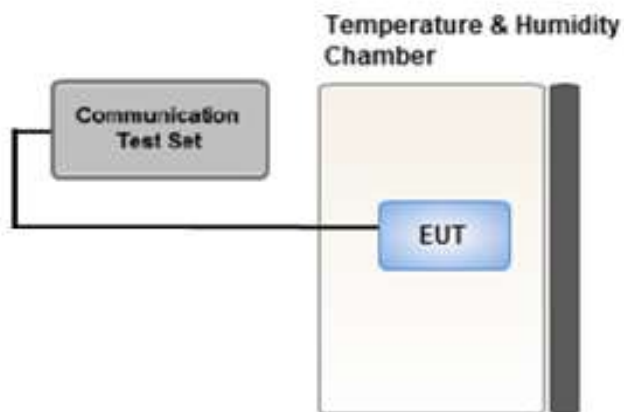
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base 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	32.00	30.00	29.00	25.50	23.00	22.00	20.00
Nominal		33.00	33.00	31.00	29.00	28.00	24.50	22.00	21.00	19.00
GSM 850	128	32.70	32.65	29.55	28.32	27.21	25.08	22.56	21.19	19.89
	190	32.14	32.13	29.70	28.37	27.23	25.26	22.66	21.30	19.84
	251	32.25	32.34	29.92	28.35	27.13	25.12	22.49	21.21	19.69

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	25.82	25.58	25.83	16.31	16.82	17.58	16.83
Nominal		23.81	23.81	24.82	24.58	24.83	15.31	15.82	16.58	15.83
GSM 850	128	23.51	23.46	23.37	23.90	24.04	15.89	16.38	16.77	16.72
	190	22.95	22.94	23.52	23.95	24.06	16.07	16.48	16.88	16.67
	251	23.06	23.15	23.74	23.93	23.96	15.93	16.31	16.79	16.52

GSM Conducted output powers (Frame-Average)

Measured RSI = 0,2,3,4

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	25.50	23.00	22.00	20.00
Nominal		30.70	30.70	27.70	25.90	24.70	24.50	22.00	21.00	19.00
GSM 850	128	29.97	29.95	26.63	24.56	23.76				
	190	30.01	30.00	26.80	24.73	23.85				
	251	29.98	29.94	26.75	24.69	23.71				

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	16.31	16.82	17.58	16.83
Nominal		21.51	21.51	21.52	21.48	21.53	15.31	15.82	16.58	15.83
GSM 850	128	20.78	20.76	20.45	20.14	20.59				
	190	20.82	20.81	20.62	20.31	20.68				
	251	20.79	20.75	20.57	20.27	20.54				

GSM Conducted output powers (Frame-Average)

GSM 850 – Antenna E

Measured P_{max}

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		33.00	33.00	31.00	29.80	28.60	25.50	23.00	22.00	20.00
Nominal		32.00	32.00	30.00	28.80	27.60	24.50	22.00	21.00	19.00
GSM 850	128	31.12	31.23	28.87	27.39	26.19	24.19	21.76	20.51	19.24
	190	31.53	31.45	28.99	27.41	26.14	24.44	21.97	20.56	19.36
	251	31.44	31.62	29.22	27.50	26.13	24.42	21.83	20.53	19.19

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		23.81	23.81	24.82	25.38	25.43	16.31	16.82	17.58	16.83
Nominal		22.81	22.81	23.82	24.38	24.43	15.31	15.82	16.58	15.83
GSM 850	128	21.93	22.04	22.69	22.97	23.02	15.00	15.58	16.09	16.07
	190	22.34	22.26	22.81	22.99	22.97	15.25	15.79	16.14	16.19
	251	22.25	22.43	23.04	23.08	22.96	15.23	15.65	16.11	16.02

GSM Conducted output powers (Frame-Average)

Measured RSI=0,2,3,4

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		29.70	29.70	26.70	24.90	23.70	25.50	23.00	22.00	20.00
Nominal		28.70	28.70	25.70	23.90	22.70	24.50	22.00	21.00	19.00
GSM 850	128	28.51	28.69	25.92	23.86	22.03				
	190	28.64	28.85	26.10	24.01	22.25				
	251	28.81	28.84	26.11	23.93	22.20				

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		19.51	19.51	19.52	19.48	19.53	16.31	16.82	17.58	16.83
Nominal		18.51	18.51	18.52	18.48	18.53	15.31	15.82	16.58	15.83
GSM 850	128	19.32	19.50	19.74	19.44	18.86				
	190	19.45	19.66	19.92	19.59	19.08				
	251	19.62	19.65	19.93	19.51	19.03				

GSM Conducted output powers (Frame-Average)

Measured 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		28.70	28.70	25.70	23.90	22.70	25.50	23.00	22.00	20.00
Nominal		27.70	27.70	24.70	22.90	21.70	24.50	22.00	21.00	19.00
GSM 850	128	27.80	28.00	25.02	22.90	21.20				
	190	27.89	28.11	25.13	23.23	21.40				
	251	27.88	28.08	25.07	23.17	21.33				

GSM Conducted output powers (Burst-Average)

Mode / Band		GSM Conducted Output Powers (Burst Average)									
		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		19.51	19.51	19.52	19.48	19.53	16.31	16.82	17.58	16.83	
Nominal		18.51	18.51	18.52	18.48	18.53	15.31	15.82	16.58	15.83	
GSM 850	128	18.61	18.81	18.84	18.48	18.03					
	190	18.70	18.92	18.95	18.81	18.23					
	251	18.69	18.89	18.89	18.75	18.16					

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		31.00	31.00	28.80	27.20	26.20	25.50	23.00	22.00	20.00
Nominal		30.00	30.00	27.80	26.20	25.20	24.50	22.00	21.00	19.00
GSM 1900	512	29.80	29.91	27.33	25.02	24.18	24.18	21.50	20.65	18.86
	661	29.66	29.83	27.29	24.88	24.21	23.98	20.88	20.62	18.88
	810	29.82	29.64	26.98	24.81	24.35	23.93	21.19	20.34	18.59

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		21.81	21.81	22.62	22.78	23.03	16.31	16.82	17.58	16.83
Nominal		20.81	20.81	21.62	21.78	22.03	15.31	15.82	16.58	15.83
GSM 1900	512	20.61	20.72	21.15	20.60	21.01	14.99	15.32	16.23	15.69
	661	20.47	20.64	21.11	20.46	21.04	14.79	14.70	16.20	15.71
	810	20.63	20.45	20.80	20.39	21.18	14.74	15.01	15.92	15.42

GSM Conducted output powers (Frame-Average)

Measured $RSI=0,2,3,4$

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		29.20	29.20	26.20	24.40	23.20	25.50	23.00	22.00	20.00
Nominal		28.20	28.20	25.20	23.40	22.20	24.50	22.00	21.00	19.00
GSM 1900	512	27.33	27.71	24.51	22.30	21.41				
	661	27.46	27.69	24.29	22.31	21.49				
	810	27.65	27.61	24.34	22.40	21.37				

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		20.01	20.01	20.02	19.98	20.03	16.31	16.82	17.58	16.83
Nominal		19.01	19.01	19.02	18.98	19.03	15.31	15.82	16.58	15.83
GSM 1900	512	18.14	18.52	18.33	17.88	18.24				
	661	18.27	18.50	18.11	17.89	18.32				
	810	18.46	18.42	18.16	17.98	18.20				

GSM Conducted output powers (Frame-Average)

Note:

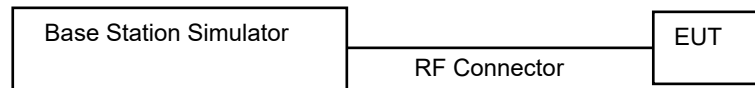
Time slot average factor is as follows:

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 Pmax

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	23.84	23.85	23.96	-
99		12.2 kbps AMR	23.86	23.88	23.97	-
5	HSDPA	Subtest 1	22.57	22.57	22.52	0
5		Subtest 2	23.81	23.86	23.91	0
5		Subtest 3	21.22	21.22	21.38	2
5		Subtest 4	20.56	20.54	20.59	2
6	HSUPA	Subtest 1	20.98	20.97	20.97	0
6		Subtest 2	18.90	18.95	18.96	2
6		Subtest 3	19.95	19.93	19.95	1
6		Subtest 4	18.91	18.93	18.96	2
6		Subtest 5	20.91	20.95	20.93	0

UMTS Average Conducted output powers

Measured RSI=0,2,3,4

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	22.53	22.52	22.48	-
99		12.2 kbps AMR	21.74	21.76	21.85	-
5	HSDPA	Subtest 1	20.82	20.84	20.94	0
5		Subtest 2	20.81	20.85	20.95	0
5		Subtest 3	20.30	20.76	20.90	0.5
5		Subtest 4	20.15	20.19	20.30	0.5
6	HSUPA	Subtest 1	20.60	20.63	20.75	0
6		Subtest 2	19.06	19.06	19.20	0.5
6		Subtest 3	19.58	19.60	19.73	0
6		Subtest 4	19.03	19.05	19.18	0.5
6		Subtest 5	19.59	19.58	19.68	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	23.09	23.15	23.08	-
99		12.2 kbps AMR	22.74	22.74	22.88	-
5	HSDPA	Subtest 1	21.65	21.66	21.76	0
5		Subtest 2	21.48	21.49	21.49	0
5		Subtest 3	21.28	21.28	21.38	0.5
5		Subtest 4	20.17	20.16	20.28	1.5
6	HSUPA	Subtest 1	20.58	20.59	20.67	0
6		Subtest 2	19.06	19.07	19.23	0.5
6		Subtest 3	20.05	20.06	20.19	0
6		Subtest 4	19.05	19.07	19.20	0.5
6		Subtest 5	20.50	20.52	20.65	0

UMTS Average Conducted output powers

UMTS Band 5 Maximum Conducted Output Power – Antenna E
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	21.19	21.22	21.25	-
99		12.2 kbps AMR	21.21	21.23	21.29	-
5	HSDPA	Subtest 1	20.93	20.94	20.98	0
5		Subtest 2	20.69	20.69	20.76	0
5		Subtest 3	20.21	20.24	20.33	0.5
5		Subtest 4	19.67	19.71	19.82	0.5
6	HSUPA	Subtest 1	20.26	20.24	20.34	0
6		Subtest 2	18.14	18.16	18.28	2
6		Subtest 3	19.15	19.12	19.27	1
6		Subtest 4	18.10	18.10	18.27	2
6		Subtest 5	20.21	20.20	20.34	0

UMTS Average Conducted output powers

Measured RSI=0,1,2,3,4

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	19.14	19.16	19.27	-
99		12.2 kbps AMR	19.19	19.22	19.32	-
5	HSDPA	Subtest 1	18.20	18.18	18.29	0
5		Subtest 2	18.67	18.68	18.79	0
5		Subtest 3	18.14	18.15	18.26	0
5		Subtest 4	18.67	18.67	18.76	0
6	HSUPA	Subtest 1	17.24	17.17	17.29	0
6		Subtest 2	17.17	17.19	17.16	0
6		Subtest 3	17.15	17.18	17.28	0
6		Subtest 4	17.15	17.15	17.24	0
6		Subtest 5	17.17	17.19	17.27	0

UMTS Average Conducted output powers

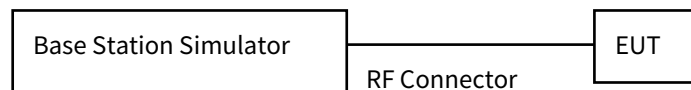
Measured RSI=1

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	18.73	18.75	18.83	
99		12.2 kbps AMR	18.76	18.78	18.86	
5	HSDPA	Subtest 1	17.70	17.67	17.76	0
5		Subtest 2	17.95	17.96	17.98	0
5		Subtest 3	17.68	17.70	17.76	0
5		Subtest 4	17.95	17.97	17.98	0
6	HSUPA	Subtest 1	16.65	16.67	16.81	0
6		Subtest 2	16.63	16.67	16.75	0
6		Subtest 3	16.66	16.68	16.83	0
6		Subtest 4	16.63	16.65	16.74	0
6		Subtest 5	16.66	16.68	16.80	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 J.

LTE B4/B5/B12/B13 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 FDD Band 2 Maximum Conducted Output Power

LTE FDD Band 2 Conducted Power _ Measured P_{max} , RSI = 1 _ Antenna B

LTE FDD 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	23.71	23.71	23.68	0	0
		1	49	23.68	23.52	23.65	0	0
		1	99	23.85	23.69	23.80	0	0
		50	0	22.85	22.67	22.67	0 - 1	1
		50	25	22.64	22.62	22.71	0 - 1	1
		50	49	22.81	22.60	22.72	0 - 1	1
		100	0	22.64	22.61	22.71	0 - 1	1
	16QAM	1	0	23.02	23.02	22.95	0 - 1	1
		1	49	22.91	22.88	22.95	0 - 1	1
		1	99	23.01	23.00	23.03	0 - 1	1
		50	0	21.69	21.63	21.68	0 - 2	2
		50	25	21.63	21.58	21.68	0 - 2	2
		50	49	21.65	21.60	21.71	0 - 2	2
		100	0	21.61	21.60	21.64	0 - 2	2
	64QAM	1	0	21.87	21.74	21.85	0 - 2	2
		1	49	21.68	21.54	21.57	0 - 2	2
		1	99	21.75	21.78	21.85	0 - 2	2
		50	0	20.65	20.61	20.64	0 - 3	3
		50	25	20.61	20.56	20.65	0 - 3	3
		50	49	20.63	20.58	20.69	0 - 3	3
		100	0	20.60	20.54	20.63	0 - 3	3

LTE FDD Band 2 Conducted Power _ Measured RSI = 0,2,3,4,_ Antenna B

LTE FDD 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	18.75	18.76	18.73	0	0
		1	49	18.84	18.79	18.83	0	0
		1	99	18.86	18.69	18.82	0	0
		50	0	18.77	18.71	18.79	0 - 1	0
		50	25	18.76	18.67	18.78	0 - 1	0
		50	49	18.80	18.65	18.77	0 - 1	0
		100	0	18.80	18.67	18.78	0 - 1	0
	16QAM	1	0	19.10	19.06	19.10	0 - 1	0
		1	49	18.88	18.82	19.00	0 - 1	0
		1	99	19.05	19.05	19.18	0 - 1	0
		50	0	18.74	18.73	18.76	0 - 2	0
		50	25	18.72	18.67	18.79	0 - 2	0
		50	49	18.75	18.69	18.77	0 - 2	0
		100	0	18.81	18.70	18.78	0 - 2	0
	64QAM	1	0	18.90	18.91	18.85	0 - 2	0
		1	49	18.94	18.85	19.02	0 - 2	0
		1	99	18.93	18.94	19.03	0 - 2	0
		50	0	18.78	18.73	18.79	0 - 3	0
		50	25	18.76	18.68	18.80	0 - 3	0
		50	49	18.75	18.70	18.82	0 - 3	0
		100	0	18.53	18.71	18.79	0 - 3	0

LTE FDD Band 2 (Upper) Conducted Power _ Measured P_{max} _ Antenna I

LTE FDD Band 2 (Upper) _ 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	24.91	24.82	24.62	0	0
		1	49	24.87	24.72	24.58	0	0
		1	99	24.90	24.63	24.55	0	0
		50	0	23.94	23.79	23.60	0-1	1
		50	25	23.92	23.71	23.54	0-1	1
		50	49	23.93	23.65	23.53	0-1	1
		100	0	23.90	23.66	23.54	0-1	1
	16QAM	1	0	24.22	24.11	23.79	0-1	1
		1	49	23.99	23.86	23.75	0-1	1
		1	99	24.14	23.91	23.81	0-1	1
		50	0	22.95	22.73	22.64	0-2	2
		50	25	22.91	22.62	22.52	0-2	2
		50	49	22.91	22.62	22.55	0-2	2
		100	0	22.92	22.59	22.53	0-2	2
	64QAM	1	0	23.08	22.85	22.74	0-2	2
		1	49	22.92	22.69	22.66	0-2	2
		1	99	22.95	22.72	22.64	0-2	2
		50	0	21.96	21.74	21.61	0-3	3
		50	25	21.90	21.65	21.54	0-3	3
		50	49	21.91	21.62	21.54	0-3	3
		100	0	21.88	21.66	21.55	0-3	3

LTE FDD Band 2 (Upper) Conducted Power _ Measured RSI = 0, 2,3,4_ Antenna I

LTE FDD Band 2 (Upper) _ 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	18.29	18.35	18.27	0	0
		1	49	18.43	18.34	18.32	0	0
		1	99	18.32	18.24	18.29	0	0
		50	0	18.28	18.29	18.26	0-1	0
		50	25	18.31	18.28	18.29	0-1	0
		50	49	18.38	18.24	18.29	0-1	0
		100	0	18.36	18.25	18.25	0-1	0
	16QAM	1	0	18.67	18.59	18.53	0-1	0
		1	49	18.37	18.31	18.47	0-1	0
		1	99	18.60	18.62	18.53	0-1	0
		50	0	18.31	18.30	18.29	0-2	0
		50	25	18.30	18.24	18.28	0-2	0
		50	49	18.40	18.26	18.31	0-2	0
		100	0	18.35	18.25	18.25	0-2	0
	64QAM	1	0	18.48	18.48	18.43	0-2	0
		1	49	18.62	18.54	18.54	0-2	0
		1	99	18.59	18.38	18.49	0-2	0
		50	0	18.39	18.31	18.27	0-3	0
		50	25	18.34	18.29	18.31	0-3	0
		50	49	18.35	18.25	18.32	0-3	0
		100	0	18.38	18.28	18.28	0-3	0

LTE FDD Band 2 (Upper) Conducted Power _ Measured RSI = 1_ Antenna I

LTE FDD Band 2 (Upper) _ 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	17.29	17.33	17.36	0	0
		1	49	17.51	17.42	17.50	0	0
		1	99	17.39	17.35	17.45	0	0
		50	0	17.33	17.37	17.37	0-1	0
		50	25	17.51	17.34	17.41	0-1	0
		50	49	17.40	17.38	17.45	0-1	0
		100	0	17.34	17.34	17.41	0-1	0
	16QAM	1	0	17.55	17.57	17.58	0-1	0
		1	49	17.56	17.59	17.55	0-1	0
		1	99	17.63	17.64	17.65	0-1	0
		50	0	17.34	17.38	17.42	0-2	0
		50	25	17.35	17.34	17.43	0-2	0
		50	49	17.40	17.37	17.46	0-2	0
		100	0	17.37	17.32	17.41	0-2	0
	64QAM	1	0	17.45	17.54	17.46	0-2	0
		1	49	17.63	17.54	17.65	0-2	0
		1	99	17.58	17.58	17.56	0-2	0
		50	0	17.35	17.35	17.41	0-3	0
		50	25	17.36	17.40	17.40	0-3	0
		50	49	17.38	17.35	17.45	0-3	0
		100	0	17.33	17.32	17.40	0-3	0

11.3.2 LTE FDD Band 4 Maximum Conducted Output Power

LTE FDD Band 4 Conducted Power _ Measured P_{max} , RSI = 1 _ Antenna B

LTE FDD 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	24.57	0	0
		1	49	24.74	0	0
		1	99	24.85	0	0
		50	0	23.64	0 - 1	1
		50	25	23.68	0 - 1	1
		50	49	23.77	0 - 1	1
		100	0	23.69	0 - 1	1
	16QAM	1	0	23.76	0 - 1	1
		1	49	23.77	0 - 1	1
		1	99	24.15	0 - 1	1
		50	0	22.61	0 - 2	2
		50	25	22.67	0 - 2	2
		50	49	22.79	0 - 2	2
		100	0	22.65	0 - 2	2
	64QAM	1	0	22.67	0 - 2	2
		1	49	22.81	0 - 2	2
		1	99	22.94	0 - 2	2
		50	0	21.61	0 - 3	3
		50	25	21.65	0 - 3	3
		50	49	21.75	0 - 3	3
		100	0	21.63	0 - 3	3

LTE FDD Band 4 Conducted Power _ Measured RSI = 0,2,3,4 _ Antenna B

LTE FDD 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	18.63	0	0
		1	49	18.79	0	0
		1	99	18.88	0	0
		50	0	18.69	0 - 1	0
		50	25	18.73	0 - 1	0
		50	49	18.81	0 - 1	0
		100	0	18.75	0 - 1	0
	16QAM	1	0	18.83	0 - 1	0
		1	49	18.89	0 - 1	0
		1	99	19.08	0 - 1	0
		50	0	18.69	0 - 2	0
		50	25	18.75	0 - 2	0
		50	49	18.85	0 - 2	0
		100	0	18.71	0 - 2	0
	64QAM	1	0	18.84	0 - 2	0
		1	49	18.95	0 - 2	0
		1	99	19.05	0 - 2	0
		50	0	18.70	0 - 3	0
		50	25	18.73	0 - 3	0
		50	49	18.85	0 - 3	0
		100	0	18.72	0 - 3	0

LTE FDD Band 4 (Upper) Conducted Power _ Measured P_{max} _ Antenna I

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20050 Ch. 1720 MHz	20175 ch. 1732.5 MHz	20300 Ch. 1745 MHz		
20 MHz	QPSK	1	0	25.33	25.40	25.20	0	0
		1	49	25.35	25.35	25.17	0	0
		1	99	25.23	25.31	25.13	0	0
		50	0	24.34	24.39	24.26	0-1	1
		50	25	24.33	24.32	24.17	0-1	1
		50	49	24.27	24.29	24.20	0-1	1
		100	0	24.30	24.32	24.19	0-1	1
	16QAM	1	0	24.38	24.34	24.47	0-1	1
		1	49	24.46	24.39	24.34	0-1	1
		1	99	24.46	24.46	24.29	0-1	1
		50	0	23.31	23.37	23.23	0-2	2
		50	25	23.28	23.29	23.16	0-2	2
		50	49	23.27	23.29	23.16	0-2	2
		100	0	23.29	23.30	23.12	0-2	2
	64QAM	1	0	23.41	23.48	23.35	0-2	2
		1	49	23.49	23.41	23.28	0-2	2
		1	99	23.41	23.33	23.16	0-2	2
		50	0	22.33	22.36	22.22	0-3	3
		50	25	22.30	22.29	22.18	0-3	3
		50	49	22.26	22.27	22.15	0-3	3
		100	0	22.26	22.30	22.12	0-3	3

LTE FDD Band 4 (Upper) Conducted Power _ Measured RSI=0,2,3,4 _ Antenna I

LTE FDD 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	20.25	0	0
		1	49	20.22	0	0
		1	99	20.10	0	0
		50	0	20.20	0-1	0
		50	25	20.12	0-1	0
		50	49	20.12	0-1	0
		100	0	20.14	0-1	0
		100	0	20.14	0-1	0
	16QAM	1	0	20.45	0-1	0
		1	49	20.32	0-1	0
		1	99	20.35	0-1	0
		50	0	20.16	0-2	0
		50	25	20.11	0-2	0
		50	49	20.10	0-2	0
		100	0	20.10	0-2	0
		100	0	20.10	0-2	0
	64QAM	1	0	20.42	0-2	0
		1	49	20.32	0-2	0
		1	99	20.18	0-2	0
		50	0	20.22	0-3	0
		50	25	20.11	0-3	0
		50	49	20.12	0-3	0
		100	0	20.10	0-3	0
		100	0	20.10	0-3	0

LTE FDD Band 4 (Upper) Conducted Power _ Measured RSI=1 _ Antenna I

LTE FDD 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	18.34	0	0
		1	49	18.34	0	0
		1	99	18.20	0	0
		50	0	18.33	0-1	0
		50	25	18.26	0-1	0
		50	49	18.24	0-1	0
		100	0	18.23	0-1	0
	16QAM	1	0	18.38	0-1	0
		1	49	18.44	0-1	0
		1	99	18.37	0-1	0
		50	0	18.34	0-2	0
		50	25	18.29	0-2	0
		50	49	18.26	0-2	0
		100	0	18.23	0-2	0
	64QAM	1	0	18.49	0-2	0
		1	49	18.48	0-2	0
		1	99	18.38	0-2	0
		50	0	18.33	0-3	0
		50	25	18.28	0-3	0
		50	49	18.26	0-3	0
		100	0	18.24	0-3	0

11.3.3 LTE FDD Band 5 Maximum Conducted Output Power

LTE FDD Band 5 Conducted Power _ Measured P_{max} , RSI = 1 _ Antenna A

LTE FDD 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	23.11	0	0
		1	24	23.15	0	0
		1	49	23.12	0	0
		25	0	21.02	0 - 1	1
		25	12	21.03	0 - 1	1
		25	24	21.07	0 - 1	1
		50	0	20.92	0 - 1	1
	16QAM	1	0	21.40	0 - 1	1
		1	24	21.41	0 - 1	1
		1	49	21.47	0 - 1	1
		25	0	20.02	0 - 2	2
		25	12	20.03	0 - 2	2
		25	24	20.08	0 - 2	2
		50	0	19.99	0 - 2	2
	64QAM	1	0	20.31	0 - 2	2
		1	24	20.36	0 - 2	2
		1	49	20.24	0 - 2	2
		25	0	19.06	0 - 3	3
		25	12	19.02	0 - 3	3
		25	24	19.02	0 - 3	3
		50	0	18.97	0 - 3	3

LTE FDD Band 5 Conducted Power _ Measured RSI = 0,2,3,4 _ Antenna A

LTE FDD 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	21.81	0	0
		1	24	21.83	0	0
		1	49	21.77	0	0
		25	0	21.20	0 - 1	0
		25	12	21.19	0 - 1	0
		25	24	21.17	0 - 1	0
		50	0	21.02	0 - 1	0
	16QAM	1	0	21.48	0 - 1	0
		1	24	21.44	0 - 1	0
		1	49	21.50	0 - 1	0
		25	0	20.20	0 - 2	0.5
		25	12	20.19	0 - 2	0.5
		25	24	20.18	0 - 2	0.5
		50	0	20.13	0 - 2	0.5
	64QAM	1	0	20.40	0 - 2	0.5
		1	24	20.40	0 - 2	0.5
		1	49	20.43	0 - 2	0.5
		25	0	19.18	0 - 3	1.5
		25	12	19.20	0 - 3	1.5
		25	24	19.19	0 - 3	1.5
		50	0	19.13	0 - 3	1.5

LTE FDD Band 5 Conducted Power _ Measured P_{max} Antenna E

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20450 Ch. 829 MHz	20525 Ch. 836.5 MHz	20600 Ch. 844 MHz		
10 MHz	QPSK	1	0	21.74	21.99	21.94	0	0
		1	24	21.89	22.03	21.62	0	0
		1	49	21.81	21.98	21.85	0	0
		25	0	19.70	19.82	19.87	0 - 1	1
		25	12	19.75	19.88	19.84	0 - 1	1
		25	24	19.73	19.87	19.82	0 - 1	1
		50	0	19.76	19.88	19.81	0 - 1	1
	16QAM	1	0	20.11	20.25	20.34	0 - 1	1
		1	24	20.06	20.20	20.16	0 - 1	1
		1	49	20.22	20.32	20.26	0 - 1	1
		25	0	18.75	18.85	18.90	0 - 2	2
		25	12	18.79	18.84	18.69	0 - 2	2
		25	24	18.78	18.90	18.86	0 - 2	2
		50	0	18.82	18.93	18.73	0 - 2	2
	64QAM	1	0	18.98	19.08	19.13	0 - 2	2
		1	24	19.13	19.25	19.17	0 - 2	2
		1	49	18.98	19.19	18.92	0 - 2	2
		25	0	17.75	17.88	17.98	0 - 3	3
		25	12	17.77	17.89	17.89	0 - 3	3
		25	24	17.75	17.91	17.84	0 - 3	3
		50	0	17.77	17.92	17.91	0 - 3	3

LTE FDD Band 5 Conducted Power _ Measured RSI = 0,1,2,3,4 _ Antenna E

LTE FDD 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	19.14	0	0
		1	24	19.22	0	0
		1	49	19.12	0	0
		25	0	18.99	0 - 1	0
		25	12	19.04	0 - 1	0
		25	24	19.05	0 - 1	0
		50	0	19.06	0 - 1	0
	16QAM	1	0	19.43	0 - 1	0
		1	24	19.36	0 - 1	0
		1	49	19.37	0 - 1	0
		25	0	18.84	0 - 2	0
		25	12	18.89	0 - 2	0
		25	24	18.91	0 - 2	0
		50	0	18.93	0 - 2	0
	64QAM	1	0	19.22	0 - 2	0
		1	24	19.17	0 - 2	0
		1	49	19.05	0 - 2	0
		25	0	18.13	0 - 3	0
		25	12	18.19	0 - 3	0
		25	24	18.19	0 - 3	0
		50	0	18.20	0 - 3	0

11.3.4 LTE FDD Band 12 Maximum Conducted Output Power

LTE FDD Band 12 Conducted Power _ Measured P_{max} , RSI=1 _ Antenna A

LTE FDD 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	23.08	0	0
		1	24	23.15	0	0
		1	49	23.00	0	0
		25	0	21.60	0 - 1	1
		25	12	21.53	0 - 1	1
		25	24	21.52	0 - 1	1
		50	0	21.52	0 - 1	1
	16QAM	1	0	21.86	0 - 1	1
		1	24	21.92	0 - 1	1
		1	49	21.88	0 - 1	1
		25	0	20.58	0 - 2	2
		25	12	20.59	0 - 2	2
		25	24	20.58	0 - 2	2
		50	0	20.55	0 - 2	2
	64QAM	1	0	20.69	0 - 2	2
		1	24	20.84	0 - 2	2
		1	49	20.69	0 - 2	2
		25	0	19.61	0 - 3	3
		25	12	19.61	0 - 3	3
		25	24	19.59	0 - 3	3
		50	0	19.54	0 - 3	3

LTE FDD Band 12 Conducted Power _ Measured RSI = 0,2,3,4 _ Antenna A

LTE FDD 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	22.29	0	0
		1	24	22.37	0	0
		1	49	22.23	0	0
		25	0	21.53	0 - 1	0
		25	12	21.47	0 - 1	0
		25	24	21.44	0 - 1	0
		50	0	21.44	0 - 1	0
	16QAM	1	0	21.86	0 - 1	0
		1	24	21.79	0 - 1	0
		1	49	21.70	0 - 1	0
		25	0	20.55	0 - 2	1
		25	12	20.49	0 - 2	1
		25	24	20.47	0 - 2	1
		50	0	20.50	0 - 2	1
	64QAM	1	0	20.66	0 - 2	1
		1	24	20.73	0 - 2	1
		1	49	20.57	0 - 2	1
		25	0	19.57	0 - 3	2
		25	12	19.53	0 - 3	2
		25	24	19.52	0 - 3	2
		50	0	19.56	0 - 3	2

LTE FDD Band 12 Conducted Power _ Measured P_{max} _ Antenna E

LTE FDD 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	21.78	0	0
		1	24	21.87	0	0
		1	49	21.70	0	0
		25	0	20.28	0 - 1	1
		25	12	20.25	0 - 1	1
		25	24	20.17	0 - 1	1
		50	0	20.25	0 - 1	1
	16QAM	1	0	20.56	0 - 1	1
		1	24	20.55	0 - 1	1
		1	49	20.55	0 - 1	1
		25	0	19.30	0 - 2	2
		25	12	19.26	0 - 2	2
		25	24	19.21	0 - 2	2
		50	0	19.30	0 - 2	2
	64QAM	1	0	19.50	0 - 2	2
		1	24	19.50	0 - 2	2
		1	49	19.26	0 - 2	2
		25	0	18.29	0 - 3	3
		25	12	18.27	0 - 3	3
		25	24	18.23	0 - 3	3
		50	0	18.27	0 - 3	3

LTE FDD Band 12 Conducted Power _ Measured RSI = 0,1,2,3,4 _ Antenna E

LTE FDD 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	18.00	0	0
		1	24	18.04	0	0
		1	49	17.85	0	0
		25	0	17.97	0 - 1	0
		25	12	17.99	0 - 1	0
		25	24	17.86	0 - 1	0
		50	0	17.94	0 - 1	0
	16QAM	1	0	18.12	0 - 1	0
		1	24	18.18	0 - 1	0
		1	49	18.12	0 - 1	0
		25	0	17.97	0 - 2	0
		25	12	17.97	0 - 2	0
		25	24	17.92	0 - 2	0
		50	0	17.96	0 - 2	0
	64QAM	1	0	18.12	0 - 2	0
		1	24	18.16	0 - 2	0
		1	49	17.98	0 - 2	0
		25	0	18.00	0 - 3	0
		25	12	17.93	0 - 3	0
		25	24	17.92	0 - 3	0
		50	0	17.98	0 - 3	0

11.3.5 LTE FDD Band 13 Maximum Conducted Output Power

LTE FDD Band 13 Conducted Power _ Measured P_{max} , RSI = 1 _ Antenna A

LTE FDD 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	23.10	0	0
		1	24	23.24	0	0
		1	49	23.11	0	0
		25	0	21.62	0 - 1	1
		25	12	21.66	0 - 1	1
		25	24	21.67	0 - 1	1
		50	0	21.64	0 - 1	1
	16QAM	1	0	21.85	0 - 1	1
		1	24	21.84	0 - 1	1
		1	49	21.80	0 - 1	1
		25	0	20.62	0 - 2	2
		25	12	20.66	0 - 2	2
		25	24	20.67	0 - 2	2
		50	0	20.67	0 - 2	2
	64QAM	1	0	20.78	0 - 2	2
		1	24	20.90	0 - 2	2
		1	49	20.81	0 - 2	2
		25	0	19.65	0 - 3	3
		25	12	19.70	0 - 3	3
		25	24	19.70	0 - 3	3
		50	0	19.63	0 - 3	3

LTE FDD Band 13 Conducted Power _ Measured RSI = 0,2,3,4 _ Antenna A

LTE FDD 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	22.02	0	0
		1	24	22.15	0	0
		1	49	22.04	0	0
		25	0	21.31	0 - 1	0
		25	12	21.25	0 - 1	0
		25	24	21.32	0 - 1	0
		50	0	21.26	0 - 1	0
	16QAM	1	0	21.46	0 - 1	0
		1	24	21.48	0 - 1	0
		1	49	21.48	0 - 1	0
		25	0	20.25	0 - 2	1
		25	12	20.27	0 - 2	1
		25	24	20.30	0 - 2	1
		50	0	20.27	0 - 2	1
	64QAM	1	0	20.36	0 - 2	1
		1	24	20.57	0 - 2	1
		1	49	20.49	0 - 2	1
		25	0	19.28	0 - 3	2
		25	12	19.33	0 - 3	2
		25	24	19.28	0 - 3	2
		50	0	19.25	0 - 3	2

LTE FDD Band 13 Conducted Power _ Measured P_{max} Antenna E

LTE FDD 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	21.54	0	0
		1	24	21.76	0	0
		1	49	21.61	0	0
		25	0	20.12	0 - 1	1
		25	12	20.12	0 - 1	1
		25	24	20.09	0 - 1	1
		50	0	20.13	0 - 1	1
	16QAM	1	0	20.24	0 - 1	1
		1	24	20.46	0 - 1	1
		1	49	20.40	0 - 1	1
		25	0	19.12	0 - 2	2
		25	12	19.15	0 - 2	2
		25	24	19.16	0 - 2	2
		50	0	19.16	0 - 2	2
	64QAM	1	0	19.23	0 - 2	2
		1	24	19.48	0 - 2	2
		1	49	19.29	0 - 2	2
		25	0	18.12	0 - 3	3
		25	12	18.17	0 - 3	3
		25	24	18.18	0 - 3	3
		50	0	18.18	0 - 3	3

LTE FDD Band 13 Conducted Power _ Measured RSI = 0,1,2,3,4 _ Antenna E

LTE FDD 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	17.17	0	0
		1	24	17.31	0	0
		1	49	17.16	0	0
		25	0	17.18	0 - 1	0
		25	12	17.19	0 - 1	0
		25	24	17.29	0 - 1	0
		50	0	17.18	0 - 1	0
	16QAM	1	0	17.46	0 - 1	0
		1	24	17.49	0 - 1	0
		1	49	17.56	0 - 1	0
		25	0	17.19	0 - 2	0
		25	12	17.24	0 - 2	0
		25	24	17.22	0 - 2	0
		50	0	17.24	0 - 2	0
	64QAM	1	0	17.24	0 - 2	0
		1	24	17.53	0 - 2	0
		1	49	17.41	0 - 2	0
		25	0	17.22	0 - 3	0
		25	12	17.25	0 - 3	0
		25	24	17.26	0 - 3	0
		50	0	17.24	0 - 3	0

11.3.6 LTE TDD Band 41 Maximum Conducted Output Power

LTE TDD Band 41 Conducted Power _ Measured P_{max} , RSI = 1 _ Antenna B

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.99	24.12	24.08	23.92	24.25	0	0
		1	49	23.82	23.98	23.79	23.95	24.01	0	0
		1	99	23.95	24.00	23.78	23.90	24.10	0	0
		50	0	23.03	23.12	22.93	22.91	23.31	0 - 1	1
		50	25	23.02	23.08	22.87	22.91	23.23	0 - 1	1
		50	49	23.02	23.07	22.83	22.95	23.22	0 - 1	1
		100	0	23.04	23.09	22.88	22.93	23.25	0 - 1	1
	16QAM	1	0	23.08	23.20	23.05	22.98	23.29	0 - 1	1
		1	49	23.13	23.28	23.09	22.97	23.29	0 - 1	1
		1	99	23.03	23.06	22.83	22.98	23.12	0 - 1	1
		50	0	22.07	22.14	21.95	21.95	22.28	0 - 2	2
		50	25	22.05	22.10	21.88	21.93	22.19	0 - 2	2
		50	49	22.06	22.09	21.83	21.98	22.20	0 - 2	2
		100	0	22.06	22.11	21.88	21.94	22.22	0 - 2	2
	64QAM	1	0	21.67	21.77	21.62	21.56	21.90	0 - 2	2
		1	49	21.54	21.60	21.71	21.55	21.58	0 - 2	2
		1	99	21.62	21.64	21.59	21.58	21.72	0 - 2	2
		50	0	21.05	21.11	20.91	20.92	21.25	0 - 3	3
		50	25	21.03	21.07	20.85	20.92	21.17	0 - 3	3
		50	49	21.03	21.04	20.80	20.95	21.15	0 - 3	3
		100	0	21.03	21.07	20.85	20.92	21.18	0 - 3	3

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

LTE TDD Band 41 Conducted Power (Power Class 3) _ Measured RSI = 0,2,3,4 _ Antenna B

LTE TDD Band 41 _ 20 Mhz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 Mhz	QPSK	1	0	21.32	21.47	21.38	21.33	21.63	0	0
		1	49	21.19	21.29	21.07	21.15	21.38	0	0
		1	99	21.28	21.34	21.12	21.35	21.46	0	0
		50	0	21.31	21.44	21.25	21.30	21.64	0 - 1	0
		50	25	21.29	21.40	21.19	21.29	21.57	0 - 1	0
		50	49	21.33	21.38	21.15	21.34	21.56	0 - 1	0
		100	0	21.32	21.41	21.20	21.31	21.59	0 - 1	0
	16QAM	1	0	21.46	21.56	21.41	21.39	21.67	0 - 1	0
		1	49	21.41	21.56	21.31	21.40	21.66	0 - 1	0
		1	99	21.40	21.42	21.18	21.40	21.51	0 - 1	0
		50	0	21.41	21.50	21.31	21.36	21.67	0 - 2	0
		50	25	21.39	21.47	21.24	21.34	21.59	0 - 2	0
		50	49	21.40	21.45	21.20	21.39	21.58	0 - 2	0
		100	0	21.40	21.47	21.25	21.35	21.60	0 - 2	0
	64QAM	1	0	21.04	21.13	20.99	20.98	21.27	0 - 2	0
		1	49	20.63	20.66	20.52	20.54	20.79	0 - 2	0
		1	99	20.99	21.00	20.78	20.99	21.12	0 - 2	0
		50	0	21.01	21.08	20.89	20.94	21.24	0 - 3	0
		50	25	20.99	21.04	20.83	20.94	21.17	0 - 3	0
		50	49	20.99	21.02	20.77	20.96	21.15	0 - 3	0
		100	0	20.99	21.05	20.83	20.94	21.18	0 - 3	0

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

LTE TDD Band 41 Conducted Power _ Measured P_{max} _ Antenna I

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	24.26	24.64	24.60	24.33	24.84	0	0
		1	49	24.18	24.66	24.39	24.34	24.76	0	0
		1	99	24.14	24.66	24.27	24.42	24.47	0	0
		50	0	23.24	23.81	23.50	23.46	23.77	0-1	1
		50	25	23.22	23.80	23.43	23.45	23.72	0-1	1
		50	49	23.27	23.79	23.39	23.50	23.68	0-1	1
		100	0	23.25	23.81	23.45	23.46	23.73	0-1	1
	16QAM	1	0	23.23	23.69	23.64	23.43	23.80	0-1	1
		1	49	23.18	23.73	23.48	23.44	23.67	0-1	1
		1	99	23.23	23.73	23.35	23.49	23.52	0-1	1
		50	0	22.24	22.78	22.54	22.45	22.77	0-2	2
		50	25	22.21	22.77	22.46	22.43	22.71	0-2	2
		50	49	22.23	22.77	22.40	22.47	22.66	0-2	2
		100	0	22.22	22.76	22.46	22.42	22.69	0-2	2
	64QAM	1	0	21.92	22.28	22.23	22.10	22.39	0-2	2
		1	49	21.96	22.42	22.17	22.18	22.36	0-2	2
		1	99	21.93	22.33	21.95	22.17	22.11	0-2	2
		50	0	21.22	21.73	21.50	21.40	21.71	0-3	3
		50	25	21.19	21.72	21.42	21.38	21.65	0-3	3
		50	49	21.22	21.72	21.36	21.42	21.60	0-3	3
		100	0	21.17	21.72	21.43	21.36	21.64	0-3	3

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

LTE TDD Band 41 Conducted Power (Power Class 3) _ Measured RSI = 0,2,3,4 _ Antenna I

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	19.39	19.70	19.77	19.66	19.79	0	0
		1	49	19.28	19.59	19.66	19.55	19.63	0	0
		1	99	19.23	19.63	19.54	19.60	19.45	0	0
		50	0	19.42	19.67	19.65	19.70	19.79	0-1	0
		50	25	19.36	19.65	19.61	19.64	19.73	0-1	0
		50	49	19.37	19.66	19.57	19.67	19.69	0-1	0
		100	0	19.38	19.67	19.60	19.64	19.73	0-1	0
	16QAM	1	0	19.46	19.57	19.85	19.64	19.88	0-1	0
		1	49	19.34	19.64	19.73	19.62	19.70	0-1	0
		1	99	19.29	19.70	19.62	19.67	19.52	0-1	0
		50	0	19.42	19.66	19.73	19.67	19.80	0-2	0
		50	25	19.37	19.67	19.68	19.65	19.73	0-2	0
		50	49	19.36	19.69	19.64	19.68	19.67	0-2	0
		100	0	19.37	19.67	19.68	19.64	19.73	0-2	0
	64QAM	1	0	19.06	19.18	19.43	19.24	19.48	0-2	0
		1	49	19.02	19.32	19.41	19.28	19.38	0-2	0
		1	99	18.92	19.30	19.23	19.28	19.14	0-2	0
		50	0	19.40	19.63	19.71	19.65	19.79	0-3	0
		50	25	19.35	19.65	19.67	19.63	19.71	0-3	0
		50	49	19.34	19.66	19.62	19.66	19.66	0-3	0
		100	0	19.36	19.64	19.67	19.63	19.71	0-3	0

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

LTE TDD Band 41 Conducted Power (Power Class 3) _ Measured RSI = 1_ Antenna I

LTE TDD Band 41 _ 20 Mhz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 Mhz	QPSK	1	0	16.70	17.20	17.03	17.02	17.30	0	0
		1	49	16.61	17.16	16.87	16.91	17.15	0	0
		1	99	16.67	17.14	16.75	16.98	16.99	0	0
		50	0	16.73	17.18	16.90	16.98	17.22	0-1	0
		50	25	16.69	17.16	16.83	16.90	17.16	0-1	0
		50	49	16.79	17.16	16.93	16.96	17.12	0-1	0
		100	0	16.70	17.17	16.83	16.90	17.18	0-1	0
	16QAM	1	0	16.76	17.21	17.16	17.01	17.37	0-1	0
		1	49	16.68	17.22	16.98	17.00	17.24	0-1	0
		1	99	16.74	17.24	16.87	17.07	17.07	0-1	0
		50	0	16.75	17.21	16.98	16.97	17.27	0-2	0
		50	25	16.72	17.21	16.90	16.96	17.21	0-2	0
		50	49	16.74	17.21	16.84	17.00	17.16	0-2	0
		100	0	16.71	17.19	16.89	16.94	17.19	0-2	0
	64QAM	1	0	16.34	16.79	16.73	16.59	16.94	0-2	0
		1	49	16.26	16.82	16.56	16.67	16.90	0-2	0
		1	99	16.34	16.85	16.46	16.67	16.67	0-2	0
		50	0	16.73	17.19	16.96	16.94	17.25	0-3	0
		50	25	16.70	17.20	16.89	16.94	17.19	0-3	0
		50	49	16.72	17.19	16.83	16.99	17.14	0-3	0
		100	0	16.69	17.18	16.89	16.94	17.18	0-3	0

Note; LTE Band 41 has 5 required test channels per FCC KDB 447498 D01v06.

11.3.7 LTE FDD Band 66 Maximum Conducted Output Power

LTE FDD Band 66 Conducted Power_ Measured P_{max} , RSI = 1 _ Antenna B

LTE FDD 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	24.80	24.95	25.07	0	0
		1	49	24.89	25.09	25.19	0	0
		1	99	24.95	25.15	25.31	0	0
		50	0	23.83	24.03	24.13	0 - 1	1
		50	25	23.85	24.09	24.18	0 - 1	1
		50	49	23.87	24.07	24.26	0 - 1	1
		100	0	23.84	24.06	24.18	0 - 1	1
	16QAM	1	0	24.14	24.16	24.29	0 - 1	1
		1	49	24.06	24.23	24.38	0 - 1	1
		1	99	24.21	24.36	24.56	0 - 1	1
		50	0	22.86	22.98	23.13	0 - 2	2
		50	25	22.84	23.06	23.18	0 - 2	2
		50	49	22.85	23.08	23.24	0 - 2	2
		100	0	22.82	23.06	23.15	0 - 2	2
	64QAM	1	0	22.96	23.02	23.15	0 - 2	2
		1	49	22.98	23.12	23.22	0 - 2	2
		1	99	23.15	23.35	23.40	0 - 2	2
		50	0	21.82	21.99	22.09	0 - 3	3
		50	25	21.82	22.03	22.11	0 - 3	3
		50	49	21.83	22.05	22.20	0 - 3	3
		100	0	21.79	21.99	22.12	0 - 3	3

LTE FDD Band 66 Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna B

LTE FDD 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	19.19	19.27	19.42	0	0
		1	49	19.25	19.49	19.60	0	0
		1	99	19.36	19.50	19.60	0	0
		50	0	19.24	19.43	19.46	0 - 1	0
		50	25	19.16	19.57	19.51	0 - 1	0
		50	49	19.46	19.44	19.59	0 - 1	0
		100	0	19.21	19.36	19.65	0 - 1	0
	16QAM	1	0	19.49	19.49	19.69	0 - 1	0
		1	49	19.52	19.45	19.62	0 - 1	0
		1	99	19.37	19.80	19.97	0 - 1	0
		50	0	19.22	19.37	19.46	0 - 2	0
		50	25	19.19	19.36	19.46	0 - 2	0
		50	49	19.28	19.45	19.58	0 - 2	0
		100	0	19.23	19.39	19.45	0 - 2	0
	64QAM	1	0	19.37	19.34	19.40	0 - 2	0
		1	49	19.45	19.70	19.77	0 - 2	0
		1	99	19.32	19.69	19.83	0 - 2	0
		50	0	19.26	19.36	19.38	0 - 3	0
		50	25	19.23	19.40	19.46	0 - 3	0
		50	49	19.18	19.47	19.57	0 - 3	0
		100	0	19.23	19.45	19.56	0 - 3	0

LTE FDD Band 66 (Upper) Conducted Power_ Measured P_{max} _ Antenna I

LTE FDD Band 66 (Upper)_ 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	25.41	25.25	24.96	0	0
		1	49	25.42	25.17	24.97	0	0
		1	99	25.32	25.15	24.84	0	0
		50	0	24.43	24.24	23.95	0-1	1
		50	25	24.41	24.18	23.93	0-1	1
		50	49	24.36	24.18	23.92	0-1	1
		100	0	24.42	24.16	23.92	0-1	1
	16QAM	1	0	24.38	24.41	24.24	0-1	1
		1	49	24.32	24.30	24.11	0-1	1
		1	99	24.33	24.37	24.09	0-1	1
		50	0	23.41	23.21	22.90	0-2	2
		50	25	23.42	23.14	22.92	0-2	2
		50	49	23.35	23.14	22.90	0-2	2
		100	0	23.37	23.13	22.89	0-2	2
	64QAM	1	0	23.48	23.31	23.08	0-2	2
		1	49	23.49	23.28	22.97	0-2	2
		1	99	23.44	23.24	23.04	0-2	2
		50	0	22.42	22.24	21.90	0-3	3
		50	25	22.40	22.15	21.91	0-3	3
		50	49	22.36	22.18	21.90	0-3	3
		100	0	22.40	22.17	21.94	0-3	3

LTE FDD Band 66 (Upper) Conducted Power_ Measured RSI = 0,2,3,4, _Antenna I

LTE FDD Band 66 (Upper)_ 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	20.34	20.24	20.00	0	0
		1	49	20.37	20.27	20.04	0	0
		1	99	20.25	20.18	19.89	0	0
		50	0	20.35	20.26	19.98	0-1	0
		50	25	20.34	20.19	19.95	0-1	0
		50	49	20.29	20.22	19.90	0-1	0
		100	0	20.37	20.20	19.99	0-1	0
	16QAM	1	0	20.49	20.44	20.18	0-1	0
		1	49	20.48	20.23	19.98	0-1	0
		1	99	20.41	20.41	20.16	0-1	0
		50	0	20.33	20.26	19.93	0-2	0
		50	25	20.33	20.18	19.95	0-2	0
		50	49	20.26	20.20	19.92	0-2	0
		100	0	20.29	20.18	19.94	0-2	0
	64QAM	1	0	20.44	20.35	20.09	0-2	0
		1	49	20.41	20.48	20.28	0-2	0
		1	99	20.43	20.20	19.95	0-2	0
		50	0	20.35	20.21	19.92	0-3	0
		50	25	20.33	20.15	19.97	0-3	0
		50	49	20.29	20.17	19.89	0-3	0
		100	0	20.29	20.17	19.91	0-3	0

LTE FDD Band 66 (Upper) Conducted Power_ Measured RSI = 1 _Antenna I

LTE FDD Band 66 (Upper)_ 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	18.23	18.15	17.88	0	0
		1	49	18.26	18.20	17.94	0	0
		1	99	18.10	18.04	17.75	0	0
		50	0	18.23	18.12	17.84	0-1	0
		50	25	18.20	18.12	17.84	0-1	0
		50	49	18.12	18.10	17.78	0-1	0
		100	0	18.18	18.11	17.88	0-1	0
	16QAM	1	0	18.41	18.49	18.12	0-1	0
		1	49	18.43	18.34	18.01	0-1	0
		1	99	18.31	18.19	18.07	0-1	0
		50	0	18.22	18.16	17.79	0-2	0
		50	25	18.22	18.10	17.87	0-2	0
		50	49	18.19	18.14	17.79	0-2	0
		100	0	18.21	18.11	17.82	0-2	0
	64QAM	1	0	18.39	18.27	18.02	0-2	0
		1	49	18.43	18.45	18.05	0-2	0
		1	99	18.30	18.28	17.93	0-2	0
		50	0	18.25	18.15	17.83	0-3	0
		50	25	18.26	18.10	17.88	0-3	0
		50	49	18.15	18.14	17.81	0-3	0
		100	0	18.26	18.09	17.87	0-3	0

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

11.3.8 LTE Uplink Carrier Aggregation Maximum Conducted Output Power

Antenna B

Up link CA	PCC						SCC						Tx. Power [dBm]	
	Bandwidth [MHz]	Channel	Frequency [MHz]	Mod	RB	RB Offset	Bandwidth [MHz]	Channel	Frequency [MHz]	Mod	RB	RB Offset	LTE Single Carrier Tx	LTE Tx Power with UL CA Enabled
41C Head	20	41490	2 680	QPSK	1	0	20	41292	2 660.2	QPSK	1	99	24.25	23.57
41C Body (Open)	20	41490	2 680	QPSK	1	0	20	41292	2 660.2	QPSK	1	99	21.63	21.78
41C Body (Closed)	20	40185	2 550	QPSK	1	0	20	39987	2 529.8	QPSK	1	99	21.47	21.35

Antenna I

Up link CA	PCC						SCC						Tx. Power [dBm]	
	Bandwidth [MHz]	Channel	Frequency [MHz]	Mod	RB	RB Offset	Bandwidth [MHz]	Channel	Frequency [MHz]	Mod	RB	RB Offset	LTE Single Carrier Tx	LTE Tx Power with UL CA Enabled
41C Head	20	41490	2 680	QPSK	1	0	20	41292	2 660.2	QPSK	1	99	17.30	17.12
41C Body (Open)	20	41055	2 637	QPSK	50	0	20	40857	2 616.7	QPSK	50	49	19.70	19.68
41C Body (Closed)	20	41490	2 680	QPSK	1	0	20	41292	2 660.2	QPSK	1	99	19.79	19.27

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 FDD Band n5 Maximum Conducted Power

NR FDD Band n5 Conducted Power_ Measured P_{max} , RSI = 1 _ Antenna A

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.37	0
				1	53	23.68	0
				1	104	23.60	0
				50	0	22.99	0.5
				50	28	23.59	0
				50	56	23.19	0.5
			QPSK	100	0	23.13	0.5
				1	1	23.41	0
				1	53	23.69	0
				1	104	23.63	0
				50	0	22.52	1
				50	28	23.61	0
				50	56	22.68	1
				100	0	22.58	1
			16QAM	1	1	22.40	1
			64QAM	1	1	20.95	2.5
			256QAM	1	1	18.79	4.5
		CP	QPSK	1	1	21.81	1.5

NR FDD Band n5 Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna A

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.22	0
				1	53	23.47	0
				1	104	23.44	0
				50	0	22.87	0
				50	28	23.44	0
				50	56	23.05	0
				100	0	22.94	0
			QPSK	1	1	23.29	0
				1	53	23.49	0
				1	104	23.45	0
				50	0	22.41	0
				50	28	22.91	0
				50	56	23.45	0
				100	0	22.47	0
			16QAM	1	1	22.27	0
			64QAM	1	1	20.89	1
			256QAM	1	1	18.68	3
		CP	QPSK	1	1	21.80	0

NR FDD Band n5 Conducted Power_ Measured P_{max} _ Antenna E

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	22.59	0
				1	53	22.58	0
				1	104	22.37	0
				50	0	22.07	0.5
				50	28	22.53	0
				50	56	21.97	0.5
				100	0	22.04	0.5
			QPSK	1	1	22.61	0
				1	53	22.59	0
				1	104	22.40	0
				50	0	21.59	1
				50	28	22.55	0
				50	56	21.49	1
				100	0	21.55	1
			16QAM	1	1	21.53	1
			64QAM	1	1	20.04	2.5
			256QAM	1	1	18.04	4.5
		CP	QPSK	1	1	21.15	1.5

NR FDD Band n5 Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna E

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.90	0
				1	53	19.89	0
				1	104	19.69	0
				50	0	19.88	0
				50	28	19.83	0
				50	56	19.78	0
				100	0	19.85	0
			QPSK	1	1	19.91	0
				1	53	19.85	0
				1	104	19.67	0
				50	0	19.89	0
				50	28	19.82	0
				50	56	19.76	0
				100	0	19.80	0
			16QAM	1	1	19.87	0
			64QAM	1	1	19.89	0
			256QAM	1	1	18.19	1.5
		CP	QPSK	1	1	19.88	0

NR FDD Band n5 Conducted Power_ Measured RSI = 1 _ Antenna E

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.27	0
				1	53	19.28	0
				1	104	19.06	0
				50	0	19.27	0
				50	28	19.21	0
				50	56	19.16	0
				100	10	19.24	0
			QPSK	1	1	19.30	0
				1	53	19.28	0
				1	104	19.08	0
				50	0	19.28	0
				50	28	19.23	0
				50	56	19.17	0
				100	0	19.24	0
			16QAM	1	1	19.25	0
			64QAM	1	1	19.36	0
			256QAM	1	1	18.04	1.5
		CP	QPSK	1	1	19.41	0

11.4.2. NR TDD Band n41 Maximum Conducted Power

NR TDD Band n41(PC3) Conducted Power_ Measured P_{max} _ Antenna B

NR TDD Band n41 (PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			25.07		0
				1	137			24.51		0
				1	271			25.23		0
				135	0			24.28		0.5
				135	69			24.55		0
				135	138			24.24		0.5
				270	0			24.05		0.5
			QPSK	1	1			25.05		0
				1	137			24.45		0
				1	271			25.29		0
				135	0			23.75		1
				135	69			24.57		0
				135	138			23.72		1
				270	0			23.81		1
			16QAM	1	1			23.97		1
			64QAM	1	1			22.64		2.5
			256QAM	1	1			20.45		4.5
		CP	QPSK	1	1			23.07		1.5

NR TDD Band n41(PC3) Conducted Power_ Measured RSI = 0,2,3,4 _Antenna B
NR TDD Band n41(PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			20.39		0
				1	137			19.89		0
				1	271			20.37		0
				135	0			20.25		0
				135	69			20.02		0
				135	138			20.24		0
				270	0			20.08		0
			QPSK	1	1			20.47		0
				1	137			19.93		0
				1	271			20.40		0
				135	0			20.29		0
				135	69			20.41		0
				135	138			20.20		0
				270	0			20.48		0
			16QAM	1	1			20.39		0
			64QAM	1	1			20.30		0
			256QAM	1	1			20.28		0
		CP	QPSK	1	1			20.24		0

NR TDD Band n41(PC3) Conducted Power_ Measured RSI = 1 _Antenna B
NR TDD Band n41(PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			24.38		0
				1	137			23.88		0
				1	271			24.37		0
				135	0			24.22		0
				135	69			23.83		0
				135	138			24.05		0
				270	0			23.97		0
			QPSK	1	1			24.46		0
				1	137			23.83		0
				1	271			24.37		0
				135	0			23.66		0
				135	69			24.25		0
				135	138			23.49		0
				270	0			24.08		0
			16QAM	1	1			23.81		0
			64QAM	1	1			22.38		1.5
			256QAM	1	1			20.27		3.5
		CP	QPSK	1	1			23.36		0.5

NR TDD Band n41(PC3) Conducted Power_ Measured P_{max} _ Antenna I

NR TDD Band n41 (PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			23.81		0
				1	137			24.67		0
				1	271			25.03		0
				135	0			24.41		0.5
				135	69			24.82		0
				135	138			24.39		0.5
				270	0			23.96		0.5
			QPSK	1	1			25.22		0
				1	137			24.74		0
				1	271			24.94		0
				135	0			23.91		1
				135	69			24.84		0
				135	138			23.87		1
				270	0			23.83		1
			16QAM	1	1			24.26		1
			64QAM	1	1			22.67		2.5
			256QAM	1	1			20.70		4.5
		CP	QPSK	1	1			23.67		1.5

NR TDD Band n41(PC3) Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna I

NR TDD Band n41 (PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			18.45		0
				1	137			17.89		0
				1	271			18.25		0
				135	0			18.22		0
				135	69			17.91		0
				135	138			18.24		0
				270	0			18.38		0
			QPSK	1	1			18.49		0
				1	137			17.88		0
				1	271			18.24		0
				135	0			18.06		0
				135	69			18.48		0
				135	138			17.99		0
				270	0			18.40		0
			16QAM	1	1			18.36		0
			64QAM	1	1			18.30		0
			256QAM	1	1			18.41		0
		CP	QPSK	1	1			18.42		0

NR TDD Band n41(PC3) Conducted Power_ Measured RSI = 1_Antenna I

NR TDD Band n41 (PC3)_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)					MPR [dB]
								518598			
								2592.99 MHz			
100 MHz	30	DFT-s	pi/2 BPSK	1	1			15.72			0
				1	137			15.24			0
				1	271			15.59			0
				135	0			15.42			0
				135	69			15.56			0
				135	138			15.31			0
				270	0			15.34			0
			QPSK	1	1			15.79			0
				1	137			15.17			0
				1	271			15.61			0
				135	0			15.66			0
				135	69			15.78			0
				135	138			15.40			0
				270	0			15.54			0
			16QAM	1	1			15.77			0
			64QAM	1	1			15.74			0
			256QAM	1	1			15.55			0
		CP	QPSK	1	1			15.79			0

11.4.3. NR FDD Band n66 Maximum Conducted Power

NR FDD Band n66 Conducted Power_ Measured P_{max} , RSI = 1 _ Antenna B

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						349000	
						1745 MHz	
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	25.07	0
				1	108	25.30	0
				1	214	25.30	0
				108	0	24.72	0.5
				108	54	25.25	0
				108	108	24.85	0.5
			QPSK	216	0	24.78	0.5
				1	1	25.04	0
				1	108	25.29	0
				1	214	25.57	0
				108	0	24.19	1
				108	54	25.44	0
				108	108	24.30	1
				216	0	24.24	1
			16QAM	1	1	24.08	1
			64QAM	1	1	22.88	2.5
			256QAM	1	1	20.44	4.5
		CP	QPSK	1	1	23.82	1.5

NR FDD Band n66 Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna B

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						349000	
						1745 MHz	
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.38	0
				1	108	19.62	0
				1	214	19.70	0
				108	0	19.54	0
				108	54	19.61	0
				108	108	19.65	0
				216	0	19.61	0
			QPSK	1	1	19.42	0
				1	108	19.65	0
				1	214	19.73	0
				108	0	19.57	0
				108	54	19.61	0
				108	108	19.68	0
				216	0	19.60	0
			16QAM	1	1	19.32	0
			64QAM	1	1	19.59	0
			256QAM	1	1	19.40	0
		CP	QPSK	1	1	19.36	0

NR FDD Band n66 Conducted Power_ Measured Pmax _ Antenna I

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						349000	
						1745 MHz	
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	25.32	0
				1	108	25.06	0
				1	214	24.87	0
				108	0	24.67	0.5
				108	54	25.08	0
				108	108	24.50	0.5
				216	0	24.60	0.5
			QPSK	1	1	25.37	0
				1	108	25.14	0
				1	214	25.12	0
				108	0	24.16	1
				108	54	25.08	0
				108	108	23.97	1
				216	0	24.08	1
			16QAM	1	1	24.30	1
			64QAM	1	1	22.85	2.5
			256QAM	1	1	20.75	4.5
		CP	QPSK	1	1	23.88	1.5

NR FDD Band n66 Conducted Power_ Measured RSI = 0,2,3,4 _ Antenna I

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						349000	
						1745 MHz	
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	20.21	0
				1	108	19.92	0
				1	214	19.72	0
				108	0	20.03	0
				108	54	19.92	0
				108	108	19.83	0
				216	0	19.95	0
			QPSK	1	1	20.21	0
				1	108	19.96	0
				1	214	19.73	0
				108	0	20.02	0
				108	54	19.93	0
				108	108	19.85	0
				216	0	19.94	0
			16QAM	1	1	20.16	0
			64QAM	1	1	20.19	0
			256QAM	1	1	20.20	0
		CP	QPSK	1	1	20.31	0

NR FDD Band n66 Conducted Power_ Measured RSI = 1 _ Antenna I

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						349000	
						1 745 MHz	
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	18.28	0
				1	108	17.99	0
				1	214	17.79	0
				108	0	18.13	0
				108	54	17.98	0
				108	108	17.90	0
				216	0	18.01	0
			QPSK	1	1	18.28	0
				1	108	18.04	0
				1	214	17.79	0
				108	0	18.11	0
				108	54	17.99	0
				108	108	17.91	0
				216	0	18.01	0
			16QAM	1	1	18.27	0
			64QAM	1	1	18.32	0
			256QAM	1	1	18.24	0
		CP	QPSK	1	1	18.33	0

11.5 WIFI Conducted Power measurement method

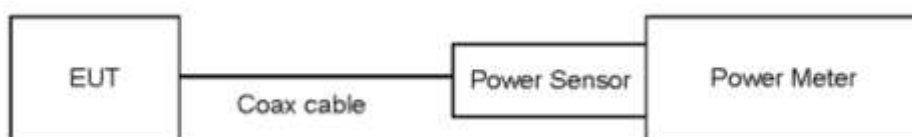
Un-Licensed Bands (DTS Band)

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

Test Procedure

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

Test setup



Un-Licensed Bands (NII Band)

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

Test Procedure

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

Test setup



11.5.1 IEEE 802.11 (2.4 GHz) Maximum and Reduced Conducted Power

Mode	Frequency [MHz]	Channel	Plimit (Head)		
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	14.33	12.72	16.61
	2 437	6	14.47	12.87	16.75
	2 462	11	14.08	12.85	16.52

Mode	Frequency [MHz]	Channel	Plimit (Body)		
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	15.35	13.64	17.59
	2 437	6	15.44	13.72	17.68
	2 462	11	15.06	13.81	17.49

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

Frequency [MHz]	Channel	Plimit (Head)		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
42	5210	11.48	10.99	14.25
58	5290	11.24	10.74	14.01
106	5530	11.48	11.39	14.45
122	5610	11.49	11.44	14.48
138	5690	11.26	11.37	14.33
155	5775	11.42	11.02	14.24
171	5855	11.48	11.23	14.37

Frequency [MHz]	Channel	Plimit (Body)		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
42	5210	15.96	15.49	18.74
58	5290	15.95	15.34	18.67
106	5530	15.40	15.06	18.25
122	5610	15.34	15.51	18.44
138	5690	15.28	15.72	18.52
155	5775	15.71	15.90	18.82
171	5855	15.82	15.95	18.90

11.5.3 IEEE 802.11 (6-7 GHz) Maximum and Reduced Conducted Power

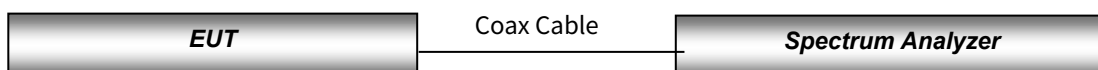
Frequency [MHz]	Channel	Plimit (Head/Body)		
		IEEE 802.11ax (40 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
3	5965	10.05	10.11	13.09
43	6165	10.66	9.92	13.31
115	6525	10.69	10.14	13.43
179	6845	10.23	10.22	13.23
227	7085	9.87	10.75	13.34

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	Ant.2
DH5	0	18.62	19.03
	39	16.81	18.71
	78	17.15	18.41
2-DH5	0	15.36	15.66
	39	13.38	15.15
	78	13.85	14.73
3-DH5	0	15.21	15.75
	39	13.51	15.25
	78	13.74	14.85

Bluetooth Dual Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]		
		Dual BT Ant.1	Dual BT Ant.2	Dual BT Ant.1+Ant.2
DH5	0	14.89	13.61	17.31
	39	14.99	14.32	17.68
	78	14.94	13.50	17.29
2-DH5	0	13.02	10.33	14.89
	39	11.93	10.79	14.41
	78	13.09	10.22	14.90
3-DH5	0	13.02	10.36	14.90
	39	11.94	10.81	14.42
	78	13.14	10.22	14.93

11.6.2 Bluetooth Reduced Conducted Power – Receiver Active (Head)

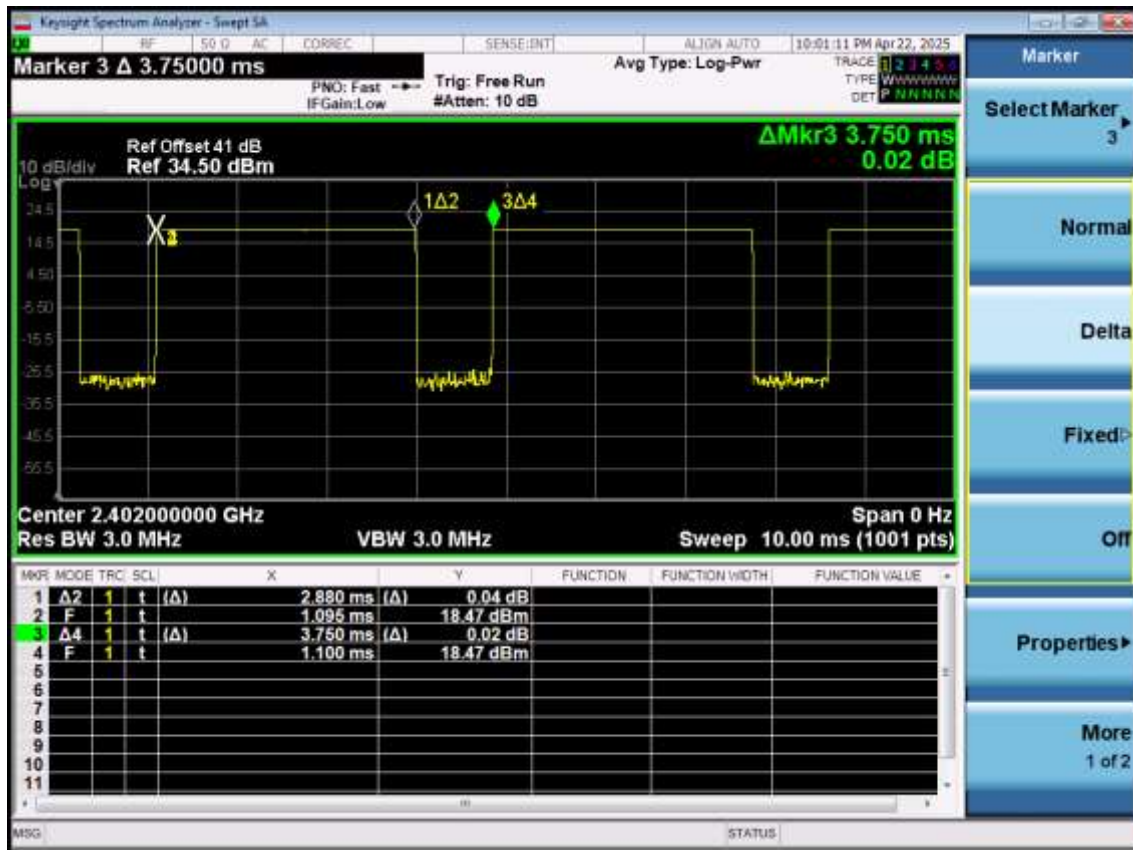
Bluetooth SISO Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]	
		Ant.1	Ant.2
DH5	0	14.67	14.67
	39	15.48	15.48
	78	15.18	15.18
2-DH5	0	13.88	13.88
	39	13.80	13.80
	78	14.64	14.64
3-DH5	0	13.90	13.90
	39	13.82	13.82
	78	14.33	14.33

Bluetooth Dual Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]		
		Dual BT Ant.1	Dual BT Ant.2	Dual BT Ant.1+Ant.2
DH5	0	11.44	11.87	14.67
	39	12.67	12.26	15.48
	78	12.06	12.28	15.18
2-DH5	0	9.16	12.09	13.88
	39	10.05	11.42	13.80
	78	11.25	11.98	14.64
3-DH5	0	9.15	12.13	13.90
	39	10.12	11.41	13.82
	78	11.30	11.33	14.33

Bluetooth DH 5 Mode



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.880 / 3.750) = 0.770 \text{ (DH5)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 79.0 % 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 77.0%, 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 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
05/15/2025	21.9	13H	12	0.749	53.748	0.750	55.000	- 0.13	- 2.28
			13	0.717	54.444	0.750	55.000	- 4.40	- 1.01
			14	0.762	54.540	0.750	55.000	+ 1.60	- 0.84
05/09/2025	21.8	750H	705	0.859	43.099	0.889	42.174	- 3.37	+ 2.19
			710	0.861	43.075	0.890	42.148	- 3.26	+ 2.20
			750	0.876	42.875	0.893	41.940	- 1.90	+ 2.23
05/12/2025	21.7	750H	705	0.852	43.669	0.889	42.174	- 4.16	+ 3.54
			710	0.854	43.675	0.890	42.148	- 4.04	+ 3.62
			750	0.869	43.475	0.893	41.940	- 2.69	+ 3.66
05/08/2025	22.1	750H	750	0.872	42.825	0.893	41.940	- 2.35	+ 2.11
			785	0.886	42.653	0.896	41.758	- 1.12	+ 2.14
05/13/2025	20.9	750H	750	0.866	43.586	0.893	41.940	- 3.02	+ 3.92
			785	0.879	43.413	0.896	41.758	- 1.90	+ 3.96
05/19/2025	22.0	835H	820	0.896	43.259	0.899	41.577	- 0.33	+ 4.05
			835	0.903	43.191	0.900	41.500	+ 0.33	+ 4.07
			850	0.909	43.126	0.916	41.500	- 0.76	+ 3.92
05/20/2025	21.8	835H	820	0.912	43.029	0.899	41.577	+ 1.45	+ 3.49
			835	0.919	42.961	0.900	41.500	+ 2.11	+ 3.52
			850	0.926	42.896	0.916	41.500	+ 1.09	+ 3.36
05/24/2025	21.0	835H	820	0.917	41.264	0.899	41.577	+ 2.00	- 0.75
			835	0.922	41.217	0.900	41.500	+ 2.44	- 0.68
			850	0.927	41.166	0.916	41.500	+ 1.20	- 0.80
05/25/2025	21.3	835H	820	0.917	41.263	0.899	41.577	+ 2.00	- 0.76
			835	0.922	41.217	0.900	41.500	+ 2.44	- 0.68
			850	0.927	41.166	0.916	41.500	+ 1.20	- 0.80
05/10/2025	21.8	835H	820	0.904	41.759	0.899	41.577	+ 0.56	+ 0.44
			835	0.911	41.691	0.900	41.500	+ 1.22	+ 0.46
			850	0.918	41.626	0.916	41.500	+ 0.22	+ 0.30
05/11/2025	21.6	835H	820	0.894	43.409	0.899	41.577	- 0.56	+ 4.41
			835	0.900	43.341	0.900	41.500	+ 0.00	+ 4.44
			850	0.907	43.276	0.916	41.500	- 0.98	+ 4.28

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
05/14/2025	22.1	1 800H	1 710	1.350	40.461	1.348	40.144	+ 0.15	+ 0.79
			1 750	1.371	40.487	1.371	40.080	+ 0.00	+ 1.02
			1 800	1.406	40.437	1.400	40.000	+ 0.43	+ 1.09
05/15/2025	22.2	1 800H	1 710	1.297	40.742	1.348	40.144	- 3.78	+ 1.49
			1 750	1.317	40.764	1.371	40.080	- 3.94	+ 1.71
			1 800	1.351	40.713	1.400	40.000	- 3.50	+ 1.78
05/25/2025	21.7	1 900H	1 850	1.404	40.472	1.400	40.000	+ 0.29	+ 1.18
			1 900	1.454	40.279	1.400	40.000	+ 3.86	+ 0.70
			1 910	1.463	40.288	1.400	40.000	+ 4.50	+ 0.72
05/09/2025	20.5	1 900H	1 850	1.388	40.579	1.400	40.000	- 0.86	+ 1.45
			1 900	1.415	40.444	1.400	40.000	+ 1.07	+ 1.11
			1 910	1.420	40.421	1.400	40.000	+ 1.43	+ 1.05
05/08/2025	20.6	1 900H	1 850	1.397	40.543	1.400	40.000	- 0.21	+ 1.36
			1 900	1.425	40.409	1.400	40.000	+ 1.79	+ 1.02
			1 910	1.429	40.387	1.400	40.000	+ 2.07	+ 0.97
05/25/2025	21.7	2 450H	2 400	1.740	39.128	1.756	39.290	- 0.91	- 0.41
			2 450	1.795	38.941	1.800	39.200	- 0.28	- 0.66
			2 500	1.850	38.780	1.855	39.140	- 0.27	- 0.92
05/24/2025	21.9	2 450H	2 400	1.740	38.633	1.756	39.290	- 0.91	- 1.67
			2 450	1.795	38.446	1.800	39.200	- 0.28	- 1.92
			2 500	1.850	38.284	1.855	39.140	- 0.27	- 2.19
05/26/2025	22.0	2 450H	2 400	1.680	40.528	1.756	39.290	- 4.33	+ 3.15
			2 450	1.733	40.340	1.800	39.200	- 3.72	+ 2.91
			2 500	1.788	40.180	1.855	39.140	- 3.61	+ 2.66
05/27/2025	21.7	2 450H	2 400	1.697	40.888	1.756	39.290	- 3.36	+ 4.07
			2 450	1.751	40.700	1.800	39.200	- 2.72	+ 3.83
			2 500	1.806	40.540	1.855	39.140	- 2.64	+ 3.58
05/10/2025	21.0	2 600H	2 500	1.850	39.281	1.855	39.140	- 0.27	+ 0.36
			2 600	1.960	38.871	1.964	39.010	- 0.20	- 0.36
			2 690	2.062	38.443	2.062	38.894	+ 0.00	- 1.16
05/11/2025	21.6	2 600H	2 500	1.862	40.460	1.855	39.140	+ 0.38	+ 3.37
			2 600	1.894	40.521	1.964	39.010	- 3.56	+ 3.87
			2 690	2.064	39.117	2.062	38.894	+ 0.10	+ 0.57
05/12/2025	21.0	2 600H	2 500	1.882	39.278	1.855	39.140	+ 1.46	+ 0.35
			2 600	2.009	39.157	1.964	39.010	+ 2.29	+ 0.38
			2 690	2.114	38.331	2.062	38.894	+ 2.52	- 1.45
05/13/2025	22.5	2 600H	2 500	1.882	39.276	1.855	39.140	+ 1.46	+ 0.35
			2 600	2.009	39.154	1.964	39.010	+ 2.29	+ 0.37
			2 690	2.115	38.329	2.062	38.894	+ 2.57	- 1.45

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
05/20/2025	22.0	5 180H-5 320H	5 180	4.569	35.929	4.635	36.010	- 1.42	- 0.22
			5 250	4.650	35.705	4.706	35.930	- 1.19	- 0.63
			5 280	4.691	35.635	4.737	35.894	- 0.97	- 0.72
			5 320	4.747	35.594	4.778	35.846	- 0.65	- 0.70
05/21/2025	22.3	5 180H-5 320H	5 180	4.592	35.381	4.635	36.010	- 0.93	- 1.75
			5 250	4.678	35.144	4.706	35.930	- 0.59	- 2.19
			5 280	4.721	35.075	4.737	35.894	- 0.34	- 2.28
			5 320	4.780	35.041	4.778	35.846	+ 0.04	- 2.25
05/22/2025	21.9	5 500H-5 600H	5 500	4.999	35.435	4.963	35.640	+ 0.73	- 0.58
			5 600	5.107	35.250	5.065	35.530	+ 0.83	- 0.79
			5 750	5.321	35.178	5.219	35.360	+ 1.95	- 0.51
05/23/2025	22.2	5 500H-5 600H	5 500	5.057	35.379	4.963	35.640	+ 1.89	- 0.73
			5 600	5.164	35.199	5.065	35.530	+ 1.95	- 0.93
			5 750	5.337	35.104	5.219	35.360	+ 2.26	- 0.72
05/24/2025	21.7	5 750H-5 825H	5 750	5.320	35.577	5.219	35.360	+ 1.94	+ 0.61
			5 800	5.242	35.588	5.270	35.300	- 0.53	+ 0.82
			5 825	5.207	35.539	5.296	35.270	-1.68	+ 0.76
05/25/2025	22.0	5 750H-5 825H	5 750	5.346	35.709	5.219	35.360	+ 2.43	+ 0.99
			5 800	5.275	35.727	5.270	35.300	+ 0.09	+ 1.21
			5 825	5.243	35.679	5.296	35.270	- 1.00	+ 1.16
05/26/2025	21.8	5 800H-5 885H	5 800	5.208	35.484	5.270	35.300	- 1.18	+ 0.52
			5 850	5.153	35.352	5.323	35.250	- 3.19	+ 0.29
			5 900	5.179	35.072	5.375	35.200	- 3.65	- 0.36
05/27/2025	21.2	5 800H-5 885H	5 800	5.245	35.325	5.270	35.300	- 0.47	+ 0.07
			5 850	5.193	35.183	5.323	35.250	- 2.44	- 0.19
			5 900	5.217	34.908	5.375	35.200	- 2.94	- 0.83
05/26/2025	21.8	6500H	5 930	5.140	34.700	5.407	35.170	- 4.90	- 1.40
			6 000	5.290	34.500	5.480	35.100	- 3.30	- 1.80
			6 300	5.710	34.300	5.834	34.740	- 2.90	- 1.30
			6 500	5.890	34.300	6.070	34.500	- 3.00	- 0.50
			6 700	6.280	33.400	6.302	34.260	- 0.40	- 2.40
			7 000	6.550	33.300	6.650	33.900	- 1.50	- 1.80
			7 150	6.690	33.200	6.827	33.720	- 2.10	- 1.60
05/27/2025	21.6	6500H	5930	5.140	34.800	5.407	35.170	- 4.80	- 1.00
			6000	5.300	34.600	5.480	35.100	- 3.10	- 1.50
			6300	5.730	34.300	5.834	34.740	- 1.80	- 1.30
			6500	5.940	34.100	6.070	34.500	- 2.10	- 1.00
			6700	6.250	33.600	6.302	34.260	- 0.90	- 2.00
			7000	6.560	33.100	6.650	33.900	- 1.40	- 2.20
			7150	6.710	33.200	6.827	33.720	- 1.70	- 1.40

◆ 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
05/20/2025	21.9	835H	820	0.918	42.056	0.899	41.577	+ 2.11	+ 1.15
			835	0.925	41.989	0.900	41.500	+ 2.78	+ 1.18
			850	0.932	41.923	0.916	41.500	+ 1.75	+ 1.02
05/21/2025	22.3	835H	820	0.927	42.254	0.899	41.577	+ 3.11	+ 1.63
			835	0.935	42.186	0.900	41.500	+ 3.89	+ 1.65
			850	0.942	42.121	0.916	41.500	+ 2.84	+ 1.50
05/22/2025	22.0	1800H	1 710	1.295	40.703	1.348	40.144	- 3.93	+ 1.39
			1 750	1.315	40.726	1.371	40.080	- 4.08	+ 1.61
			1 800	1.350	40.674	1.400	40.000	- 3.57	+ 1.69
05/23/2025	22.2	1800H	1 710	1.295	40.698	1.348	40.144	- 3.93	+ 1.38
			1 750	1.315	40.722	1.371	40.080	- 4.08	+ 1.60
			1 800	1.350	40.670	1.400	40.000	- 3.57	+ 1.68
05/22/2025	21.3	2 600H	2 500	1.829	38.656	1.855	39.140	- 1.40	- 1.24
			2 600	1.924	38.175	1.964	39.010	- 2.04	- 2.14
			2 690	2.060	38.099	2.062	38.894	- 0.10	- 2.04
05/23/2025	21.7	2 600H	2 500	1.829	38.657	1.855	39.140	- 1.40	- 1.23
			2 600	1.924	38.175	1.964	39.010	- 2.04	- 2.14
			2 690	2.060	38.098	2.062	38.894	- 0.10	- 2.05

12.2 System Verification

◆ GSM/ UMTS/ LTE/WLAN Band

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	05/09/2025	7679	1122	Head	21.9	21.8	8.58	0.428	8.56	- 0.23	± 10
750	05/12/2025	7679		Head	21.8	21.7	8.58	0.427	8.54	- 0.47	± 10
750	05/08/2025	7679		Head	22.2	22.1	8.58	0.426	8.52	- 0.70	± 10
750	05/13/2025	7679		Head	21.0	20.9	8.58	0.425	8.50	- 0.93	± 10
835	05/19/2025	7679	441	Head	22.1	22.0	9.73	0.510	10.20	+ 4.83	± 10
835	05/20/2025	7679		Head	21.9	21.8	9.73	0.523	10.46	+ 7.50	± 10
835	05/24/2025	7679		Head	21.1	21.0	9.73	0.506	10.12	+ 4.01	± 10
835	05/25/2025	7679		Head	21.4	21.3	9.73	0.504	10.08	+ 3.60	± 10
835	05/10/2025	7679		Head	22.0	21.8	9.73	0.521	10.42	+ 7.09	± 10
835	05/11/2025	7679		Head	21.7	21.6	9.73	0.517	10.34	+ 6.27	± 10
1 800	05/14/2025	7622	2d015	Head	22.3	22.1	39.00	1.81	36.20	- 7.18	± 10
1 800	05/15/2025	7622		Head	22.3	22.2	39.00	1.80	36.00	- 7.69	± 10
1 900	05/25/2025	7622	5d061	Head	21.9	21.7	38.10	1.91	38.20	+ 0.26	± 10
1 900	05/09/2025	7622		Head	20.6	20.5	38.10	1.86	37.20	- 2.36	± 10
1 900	05/08/2025	7622		Head	20.8	20.6	38.10	1.88	37.60	- 1.31	± 10
2 450	05/25/2025	3076	1049	Head	21.9	21.7	52.60	2.40	48.00	- 8.75	± 10
2 450	05/24/2025	3076		Head	22.0	21.9	52.60	2.41	48.20	- 8.37	± 10
2 450	05/26/2025	3076		Head	22.1	22.0	52.60	2.55	51.00	- 3.04	± 10
2 450	05/27/2025	3076		Head	21.9	21.7	52.60	2.57	51.40	- 2.28	± 10
2 600	05/10/2025	7622	1106	Head	21.1	21.0	55.70	2.61	52.20	- 6.28	± 10
2 600	05/11/2025	7622		Head	21.8	21.6	55.70	2.65	53.00	- 4.85	± 10
2 600	05/12/2025	7622		Head	21.1	21.0	55.70	2.61	52.20	- 6.28	± 10
2 600	05/13/2025	7622		Head	22.7	22.5	55.70	2.61	52.20	- 6.28	± 10
5 250	05/20/2025	7309	1107	Head	22.1	22.0	80.20	3.99	79.80	- 0.50	± 10
5 250	05/21/2025	7309		Head	22.4	22.3	80.20	4.01	80.20	+ 0.00	± 10
5 600	05/22/2025	7309		Head	22.1	21.9	82.10	4.31	86.20	+ 4.99	± 10
5 600	05/23/2025	7309		Head	22.4	22.2	82.10	4.35	87.00	+ 5.97	± 10
5 750	05/24/2025	7309		Head	21.8	21.7	79.90	4.11	82.20	+ 2.88	± 10
5 750	05/25/2025	7309		Head	22.1	22.0	79.90	4.14	82.80	+ 3.63	± 10
5 800	05/26/2025	7309		Head	21.9	21.8	79.30	3.89	77.80	- 1.89	± 10
5 800	05/27/2025	7309		Head	21.4	21.2	79.30	3.91	78.20	- 1.39	± 10
6 500	05/26/2025	7702	1012	Head	21.9	21.8	297.0	14.4	288	- 3.03	± 10
6 500	05/27/2025	7702		Head	21.8	21.6	297.0	14.7	294	- 1.01	± 10

◆ 5G NR SUB 6 Band

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	05/20/2025	7732	441	Head	22.1	21.9	9.73	0.509	10.18	+ 4.62	± 10
835	05/21/2025	7732		Head	22.4	22.3	9.73	0.506	10.12	+ 4.01	± 10
1 800	05/22/2025	7732	2d015	Head	22.1	22.0	38.10	2.01	40.20	+ 5.51	± 10
1 800	05/23/2025	7732		Head	22.4	22.2	38.10	2.02	40.40	+ 6.04	± 10
2 600	05/22/2025	3076	1106	Head	21.4	21.3	55.70	2.7	54.00	- 3.05	± 10
2 600	05/23/2025	3076		Head	21.8	21.7	55.70	2.69	53.80	- 3.41	± 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	05/15/2025	3076	1016	Head	22.0	21.9	0.347	0.016	0.320	-7.78	± 10

12.3 SAR Test System Verification Procedure

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

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

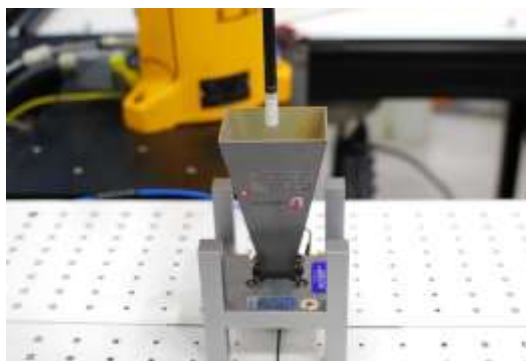
Note;

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

12.4 Power density System Verification

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check.

The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provide by the manufacturer, per November 2017 TCBC Workshop Notes.



◆ 10 GHz Power Density System Verification Results

Input Power: 50 mW

Freq. [GHz]	Date	Probe (S/N)	Dipole (S/N)	Amb. Temp. [°C]	Normal psPD (W/m ² over 4 cm ²)			Deviation [dB]	Total psPD (W/m ² over 4 cm ²)			Deviation [dB]
					Measured	Normalized	Target		Measured	Normalized	Target	
10	05/25/2025	9464	1018	21.9	25.6	51.2	56.5	- 0.43	25.9	51.8	57.1	- 0.42
10	05/26/2025	9464	1018	21.9	26.1	52.2	56.5	- 0.34	26.2	52.4	57.1	- 0.37
10	05/27/2025	9464	1018	21.8	26.5	53.0	56.5	- 0.28	26.9	53.8	57.1	- 0.26
10	05/28/2025	9464	1018	22.1	26.9	53.8	56.5	- 0.21	26.9	53.8	57.1	- 0.26

13. SAR Test Data Summary

13.1 Head SAR Measurement Results

GSM 850 Head SAR												
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(W/kg)		(W/kg)	
836.6	190	GSM Voice	A	34.00	32.14	-0.02	Left Touch	1:8.3	0.104	1.535	0.160	-
836.6	190	GSM Voice	A	34.00	32.14	0.11	Left Tilt	1:8.3	0.060	1.535	0.092	-
836.6	190	GSM Voice	A	34.00	32.14	0.12	Right Touch	1:8.3	0.170	1.535	0.261	-
836.6	190	GSM Voice	A	34.00	32.14	-0.17	Right Tilt	1:8.3	0.064	1.535	0.098	-
836.6	190	GPRS 4Tx	A	29.00	27.23	0.12	Left Touch	1:2.08	0.107	1.503	0.161	-
836.6	190	GPRS 4Tx	A	29.00	27.23	0.18	Left Tilt	1:2.08	0.065	1.503	0.098	-
836.6	190	GPRS 4Tx	A	29.00	27.23	-0.17	Right Touch	1:2.08	0.192	1.503	0.289	-
836.6	190	GPRS 4Tx	A	29.00	27.23	0.15	Right Tilt	1:2.08	0.066	1.503	0.099	-
836.6	190	GSM Voice	E	27.89	-0.01	-0.01	Left Touch	1:8.3	0.228	1.205	0.275	-
836.6	190	GSM Voice	E	27.89	0.03	0.03	Left Tilt	1:8.3	0.078	1.205	0.094	-
836.6	190	GSM Voice	E	27.89	-0.01	-0.01	Right Touch	1:8.3	0.359	1.205	0.433	A1
836.6	190	GSM Voice	E	27.89	0.17	0.17	Right Tilt	1:8.3	0.137	1.205	0.165	-
836.6	190	GPRS 4Tx	E	21.40	0.06	0.06	Left Touch	1:2.08	0.183	1.349	0.247	-
836.6	190	GPRS 4Tx	E	21.40	-0.17	-0.17	Left Tilt	1:2.08	0.065	1.349	0.088	-
836.6	190	GPRS 4Tx	E	21.40	-0.07	-0.07	Right Touch	1:2.08	0.309	1.349	0.417	-
836.6	190	GPRS 4Tx	E	21.40	-0.04	-0.04	Right Tilt	1:2.08	0.117	1.349	0.158	-
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

GSM 1900 Head SAR												
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(W/kg)		(W/kg)	
1 850.2	512	GSM Voice	B	31.0	29.82	n/a	Left Touch	1:8.3	0.042	1.312	0.055	-
1 850.2	512	GSM Voice	B	31.0	29.82	-0.18	Left Tilt	1:8.3	0.015	1.312	0.020	-
1 850.2	512	GSM Voice	B	31.0	29.82	-0.13	Right Touch	1:8.3	0.041	1.312	0.054	-
1 850.2	512	GSM Voice	B	31.0	29.82	0.15	Right Tilt	1:8.3	0.015	1.312	0.020	-
1 850.2	512	GPRS 4Tx	B	26.2	24.35	-0.08	Left Touch	1:2.08	0.058	1.531	0.089	A2
1 850.2	512	GPRS 4Tx	B	26.2	24.35	-0.14	Left Tilt	1:2.08	0.014	1.531	0.021	-
1 850.2	512	GPRS 4Tx	B	26.2	24.35	-0.08	Right Touch	1:2.08	0.045	1.531	0.069	-
1 850.2	512	GPRS 4Tx	B	26.2	24.35	-0.19	Right Tilt	1:2.08	0.017	1.531	0.026	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 5 Head SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(W/kg)		(W/kg)	
836.6	4183	RMC	A	24.9	23.15	0.19	Left Touch	1:1	0.116	1.496	0.174	-
836.6	4183	RMC	A	24.9	23.15	0.14	Left Tilt	1:1	0.067	1.496	0.100	-
836.6	4183	RMC	A	24.9	23.15	0.12	Right Touch	1:1	0.202	1.496	0.302	-
836.6	4183	RMC	A	24.9	23.15	0.18	Right Tilt	1:1	0.087	1.496	0.130	-
836.6	4183	RMC	E	19.5	18.75	0.04	Left Touch	1:1	0.222	1.189	0.264	-
836.6	4183	RMC	E	19.5	18.75	0.08	Left Tilt	1:1	0.094	1.189	0.112	-
836.6	4183	RMC	E	19.5	18.75	0.12	Right Touch	1:1	0.467	1.189	0.555	A3
836.6	4183	RMC	E	19.5	18.75	0.17	Right Tilt	1:1	0.165	1.189	0.196	-
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 2 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.			(Mhz)	(dBm)	(dBm)	(dB)		(dB)				(dB)		(W/kg)	
1 860	18700	QPSK	B	20	25.5	23.85	-0.12	Left Touch	0	1	99	1:1	0.072	1.462	0.105	-
1 860	18700	QPSK	B	20	24.5	22.85	-0.11	Left Touch	1	50	0	1:1	0.053	1.462	0.077	-
1 860	18700	QPSK	B	20	25.5	23.85	-0.04	Left Tilt	0	1	99	1:1	0.041	1.462	0.060	-
1 860	18700	QPSK	B	20	24.5	22.85	-0.12	Left Tilt	1	50	0	1:1	0.028	1.462	0.041	-
1 860	18700	QPSK	B	20	25.5	23.85	0.13	Right Touch	0	1	99	1:1	0.076	1.462	0.111	-
1 860	18700	QPSK	B	20	24.5	22.85	0.12	Right Touch	1	50	0	1:1	0.058	1.462	0.085	-
1 860	18700	QPSK	B	20	25.5	23.85	-0.18	Right Tilt	0	1	99	1:1	0.045	1.462	0.066	-
1 860	18700	QPSK	B	20	24.5	22.85	-0.10	Right Tilt	1	50	0	1:1	0.030	1.462	0.044	-
1 860	18700	QPSK	I	20	18.0	17.51	-0.14	Left Touch	0	1	49	1:1	0.089	1.119	0.100	A4
1 860	18700	QPSK	I	20	18.0	17.51	-0.07	Left Touch	0	50	0	1:1	0.033	1.119	0.037	-
1 860	18700	QPSK	I	20	18.0	17.51	-0.10	Left Tilt	0	1	49	1:1	0.033	1.119	0.037	-
1 860	18700	QPSK	I	20	18.0	17.51	-0.18	Left Tilt	0	50	0	1:1	0.026	1.119	0.029	-
1 860	18700	QPSK	I	20	18.0	17.51	-0.19	Right Touch	0	1	49	1:1	0.076	1.119	0.085	-
1 860	18700	QPSK	I	20	18.0	17.51	0.00	Right Touch	0	50	0	1:1	0.063	1.119	0.070	-
1 860	18700	QPSK	I	20	18.0	17.51	-0.10	Right Tilt	0	1	49	1:1	0.031	1.119	0.035	-
1 860	18700	QPSK	I	20	18.0	17.51	0.00	Right Tilt	0	50	0	1:1	0.022	1.119	0.025	-
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 5 Head SAR																
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.			(Mhz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
836.5	20525	QPSK	A	10	24.0	23.15	0.00	Left Touch	0	1	24	1:1	0.115	1.216	0.140	-
836.5	20525	QPSK	A	10	23.0	21.04	-0.04	Left Touch	1	25	24	1:1	0.068	1.570	0.107	-
836.5	20525	QPSK	A	10	24.0	23.15	0.04	Left Tilt	0	1	24	1:1	0.073	1.216	0.089	-
836.5	20525	QPSK	A	10	23.0	21.04	-0.12	Left Tilt	1	25	24	1:1	0.042	1.570	0.066	-
836.5	20525	QPSK	A	10	24.0	23.15	-0.15	Right Touch	0	1	24	1:1	0.227	1.216	0.276	
836.5	20525	QPSK	A	10	23.0	21.04	-0.16	Right Touch	1	25	24	1:1	0.144	1.570	0.226	-
836.5	20525	QPSK	A	10	24.0	23.15	-0.18	Right Tilt	0	1	24	1:1	0.093	1.216	0.113	-
836.5	20525	QPSK	A	10	23.0	21.04	-0.17	Right Tilt	1	25	24	1:1	0.056	1.570	0.088	-
836.5	20525	QPSK	E	10	20.5	19.22	0.00	Left Touch	0	1	24	1:1	0.244	1.343	0.328	
836.5	20525	QPSK	E	10	20.5	19.05	-0.12	Left Touch	1	25	24	1:1	0.145	1.396	0.202	
836.5	20525	QPSK	E	10	20.5	19.22	0.00	Left Tilt	0	1	24	1:1	0.093	1.343	0.125	
836.5	20525	QPSK	E	10	20.5	19.05	0.18	Left Tilt	1	25	24	1:1	0.092	1.396	0.128	
836.5	20525	QPSK	E	10	20.5	19.22	-0.06	Right Touch	0	1	24	1:1	0.444	1.343	0.596	A5
836.5	20525	QPSK	E	10	20.5	19.05	-0.18	Right Touch	1	25	24	1:1	0.419	1.396	0.585	
836.5	20525	QPSK	E	10	20.5	19.22	0.04	Right Tilt	0	1	24	1:1	0.141	1.343	0.189	
836.5	20525	QPSK	E	10	20.5	19.05	-0.07	Right Tilt	1	25	24	1:1	0.140	1.396	0.195	
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 12 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
707.5	23095	QPSK	A	10	25.0	23.15	0.16	Left Touch	0	1	24	1:1	0.134	1.531	0.205	-
707.5	23095	QPSK	A	10	24.0	21.60	0.19	Left Touch	1	25	0	1:1	0.090	1.738	0.156	-
707.5	23095	QPSK	A	10	25.0	23.15	0.12	Left Tilt	0	1	24	1:1	0.080	1.531	0.122	-
707.5	23095	QPSK	A	10	24.0	21.60	0.11	Left Tilt	1	25	0	1:1	0.051	1.738	0.089	-
707.5	23095	QPSK	A	10	25.0	23.15	-0.17	Right Touch	0	1	24	1:1	0.159	1.531	0.243	-
707.5	23095	QPSK	A	10	24.0	21.60	-0.17	Right Touch	1	25	0	1:1	0.112	1.738	0.195	-
707.5	23095	QPSK	A	10	25.0	23.15	-0.15	Right Tilt	0	1	24	1:1	0.081	1.531	0.124	-
707.5	23095	QPSK	A	10	24.0	21.60	-0.16	Right Tilt	1	25	0	1:1	0.057	1.738	0.099	-
707.5	23095	QPSK	E	10	19.0	18.04	-0.02	Left Touch	0	1	24	1:1	0.189	1.247	0.236	-
707.5	23095	QPSK	E	10	19.0	17.99	0.14	Left Touch	0	25	12	1:1	0.130	1.262	0.164	-
707.5	23095	QPSK	E	10	19.0	18.04	0.18	Left Tilt	0	1	24	1:1	0.072	1.247	0.090	-
707.5	23095	QPSK	E	10	19.0	17.99	-0.13	Left Tilt	0	25	12	1:1	0.060	1.262	0.076	-
707.5	23095	QPSK	E	10	19.0	18.04	-0.11	Right Touch	0	1	24	1:1	0.422	1.247	0.526	A6
707.5	23095	QPSK	E	10	19.0	17.99	-0.14	Right Touch	0	25	12	1:1	0.330	1.262	0.416	-
707.5	23095	QPSK	E	10	19.0	18.04	-0.12	Right Tilt	0	1	24	1:1	0.151	1.247	0.188	-
707.5	23095	QPSK	E	10	19.0	17.99	-0.17	Right Tilt	0	25	12	1:1	0.147	1.262	0.186	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 13 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
782.0	23230	QPSK	A	10	25.0	23.24	-0.10	Left Touch	0	1	24	1:1	0.131	1.500	0.197	-
782.0	23230	QPSK	A	10	24.0	21.67	-0.15	Left Touch	1	25	24	1:1	0.091	1.710	0.156	-
782.0	23230	QPSK	A	10	25.0	23.24	-0.17	Left Tilt	0	1	24	1:1	0.099	1.500	0.149	-
782.0	23230	QPSK	A	10	24.0	21.67	-0.13	Left Tilt	1	25	24	1:1	0.068	1.710	0.116	-
782.0	23230	QPSK	A	10	25.0	23.24	0.00	Right Touch	0	1	24	1:1	0.228	1.500	0.342	-
782.0	23230	QPSK	A	10	24.0	21.67	-0.06	Right Touch	1	25	24	1:1	0.168	1.710	0.287	-
782.0	23230	QPSK	A	10	25.0	23.24	0.07	Right Tilt	0	1	24	1:1	0.114	1.500	0.171	-
782.0	23230	QPSK	A	10	24.0	21.67	0.03	Right Tilt	1	25	24	1:1	0.078	1.710	0.133	-
782.0	23230	QPSK	E	10	18.5	17.31	-0.04	Left Touch	0	1	24	1:1	0.147	1.315	0.193	-
782.0	23230	QPSK	E	10	18.5	17.29	0.07	Left Touch	0	25	24	1:1	0.098	1.321	0.129	-
782.0	23230	QPSK	E	10	18.5	17.31	-0.19	Left Tilt	0	1	24	1:1	0.064	1.315	0.084	-
782.0	23230	QPSK	E	10	18.5	17.29	0.17	Left Tilt	0	25	24	1:1	0.041	1.321	0.054	-
782.0	23230	QPSK	E	10	18.5	17.31	0.09	Right Touch	0	1	24	1:1	0.396	1.315	0.521	A7
782.0	23230	QPSK	E	10	18.5	17.29	-0.16	Right Touch	0	25	24	1:1	0.213	1.321	0.281	-
782.0	23230	QPSK	E	10	18.5	17.31	0.16	Right Tilt	0	1	24	1:1	0.085	1.315	0.112	-
782.0	23230	QPSK	E	10	18.5	17.29	0.10	Right Tilt	0	25	24	1:1	0.100	1.321	0.132	-
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 (Power Class 3) Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.	
Mhz	Ch.			(Mhz)	(dBm)	(dBm)	(dB)		(dB)	(W/kg)	(W/kg)						
2 680	41490	QPSK	B	20	25.5	24.25	-0.18	Left Touch	0	1	0	1:1.58	0.033	1.334	0.044	-	
2 680	41490	QPSK	B	20	24.5	23.31	-0.19	Left Touch	1	50	0	1:1.58	0.024	1.315	0.032	-	
2 680	41490	QPSK	B	20	25.5	24.25	-0.11	Left tilt	0	1	0	1:1.58	0.005	1.334	0.007	-	
2 680	41490	QPSK	B	20	24.5	23.31	-0.12	Left tilt	1	50	0	1:1.58	0.003	1.315	0.004	-	
2 680	41490	QPSK	B	20	25.5	24.25	-0.09	Right touch	0	1	0	1:1.58	0.031	1.334	0.041	-	
2 680	41490	QPSK	B	20	24.5	23.31	0.17	Right touch	1	50	0	1:1.58	0.023	1.315	0.030	-	
2 680	41490	QPSK	B	20	25.5	24.25	0.17	Right Tilt	0	1	0	1:1.58	0.014	1.334	0.019	-	
2 680	41490	QPSK	B	20	24.5	23.31	-0.14	Right Tilt	1	50	0	1:1.58	0.009	1.315	0.012	-	
Intra-Band Uplink Carrier Aggregation(41C)																	
PCC	2 680	41490	QPSK	B	20	25.5	23.57	0.03	Left Touch	0	1	0	1:1.58	0.020	1.560	0.031	-
SCC	2 660.2	41292	QPSK	B	20					0	1	99					
2 680	41490	QPSK	I	20	17.8	17.30	-0.10	Left Touch	0	1	0	1:1.58	0.682	1.122	0.765	A8	
2 506	39750	QPSK	I	20	17.8	16.70	0.09	Left Touch	0	1	0	1:1.58	0.496	1.288	0.639	-	
2 549.5	40185	QPSK	I	20	17.8	17.20	0.12	Left Touch	0	1	0	1:1.58	0.545	1.148	0.626	-	
2 593	40620	QPSK	I	20	17.8	17.03	0.17	Left Touch	0	1	0	1:1.58	0.587	1.194	0.701	-	
2 636.5	41055	QPSK	I	20	17.8	17.02	-0.12	Left Touch	0	1	0	1:1.58	0.665	1.197	0.796	-	
2 680	41490	QPSK	I	20	17.8	17.22	0.17	Left Touch	0	50	0	1:1.58	0.656	1.143	0.750	-	
2 506	39750	QPSK	I	20	17.8	16.79	0.18	Left Touch	0	50	49	1:1.58	0.512	1.262	0.646	-	
2 549.5	40185	QPSK	I	20	17.8	17.18	0.12	Left Touch	0	50	0	1:1.58	0.549	1.153	0.633	-	
2 593	40620	QPSK	I	20	17.8	16.93	0.16	Left Touch	0	50	49	1:1.58	0.587	1.222	0.717	-	
2 636.5	41055	QPSK	I	20	17.8	16.98	0.07	Left Touch	0	50	0	1:1.58	0.666	1.208	0.805	-	
2 680	41490	QPSK	I	20	17.8	17.18	0.16	Left Touch	0	100	0	1:1.58	0.644	1.153	0.743	-	
2 680	41490	QPSK	I	20	17.8	17.30	0.18	Left Tilt	0	1	0	1:1.58	0.116	1.122	0.130	-	
2 680	41490	QPSK	I	20	17.8	17.22	-0.16	Left Tilt	0	50	0	1:1.58	0.112	1.143	0.128	-	
2 680	41490	QPSK	I	20	17.8	17.30	0.12	Right Touch	0	1	0	1:1.58	0.168	1.122	0.188	-	
2 680	41490	QPSK	I	20	17.8	17.22	0.15	Right Touch	0	50	0	1:1.58	0.162	1.143	0.185	-	
2 680	41490	QPSK	I	20	17.8	17.30	0.12	Right Tilt	0	1	0	1:1.58	0.032	1.122	0.036	-	
2 680	41490	QPSK	I	20	17.8	17.22	0.11	Right Tilt	0	50	0	1:1.58	0.031	1.143	0.035	-	
Intra-Band Uplink Carrier Aggregation(41C)																	
PCC	2 680	41490	QPSK	B	20	17.8	17.12	-0.18	Left Touch	0	1	0	1:1.58	0.617	1.169	0.721	-
SCC	2 660.2	41292	QPSK	B	20					0	1	99					
ANSI/ IEEE C95.1 - 2005– Safety Limit								Head									
Spatial Peak								1.6 W/kg									
Uncontrolled Exposure/ General Population								Averaged over 1 gram									

LTE FDD Band 66 (AWS) Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.															
1 770	132572	QPSK	B	20	26.2	24.72	-0.17	Left Touch	0	1	99	1:1	0.043	1.406	0.060	-
1 770	132572	QPSK	B	20	25.2	23.68	-0.14	Left Touch	1	50	49	1:1	0.033	1.419	0.047	-
1 770	132572	QPSK	B	20	26.2	24.72	-0.13	Left Tilt	0	1	99	1:1	0.022	1.406	0.031	-
1 770	132572	QPSK	B	20	25.2	23.68	-0.03	Left Tilt	1	50	49	1:1	0.015	1.419	0.021	-
1 770	132572	QPSK	B	20	26.2	24.72	-0.16	Right Touch	0	1	99	1:1	0.045	1.406	0.063	-
1 770	132572	QPSK	B	20	25.2	23.68	0.11	Right Touch	1	50	49	1:1	0.036	1.419	0.051	-
1 770	132572	QPSK	B	20	26.2	24.72	0.00	Right Tilt	0	1	99	1:1	0.013	1.406	0.018	-
1 770	132572	QPSK	B	20	25.2	23.68	0.18	Right Tilt	1	50	49	1:1	0.009	1.419	0.013	-
1 720	132072	QPSK	I	20	18.5	18.26	-0.15	Left Touch	0	1	49	1:1	0.250	1.057	0.264	-
1 720	132072	QPSK	I	20	18.5	18.23	0.11	Left Touch	0	50	0	1:1	0.251	1.064	0.267	A9
1 720	132072	QPSK	I	20	18.5	18.26	0.05	Left Tilt	0	1	49	1:1	0.063	1.057	0.067	-
1 720	132072	QPSK	I	20	18.5	18.23	0.10	Left Tilt	0	50	0	1:1	0.065	1.064	0.069	-
1 720	132072	QPSK	I	20	18.5	18.26	-0.07	Right Touch	0	1	49	1:1	0.058	1.057	0.061	-
1 720	132072	QPSK	I	20	18.5	18.23	-0.09	Right Touch	0	50	0	1:1	0.057	1.064	0.061	-
1 720	132072	QPSK	I	20	18.5	18.26	-0.12	Right Tilt	0	1	49	1:1	0.036	1.057	0.038	-
1 720	132072	QPSK	I	20	18.5	18.23	-0.07	Right Tilt	0	50	0	1:1	0.036	1.064	0.038	-
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

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.															
836.5	167300	DFT-s QPSK	A	20	25.0	23.69	0.13	Left Touch	0	1	53	1:1	0.048	1.352	0.065	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.61	0	Left Touch	0	50	28	1:1	0.048	1.377	0.066	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.69	0.01	Left Tilt	0	1	53	1:1	0.026	1.352	0.035	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.61	0.1	Left Tilt	0	50	28	1:1	0.026	1.377	0.036	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.69	0.15	Right Touch	0	1	53	1:1	0.108	1.352	0.146	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.61	-0.14	Right Touch	0	50	28	1:1	0.107	1.377	0.147	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.69	0.17	Right Tilt	0	1	53	1:1	0.032	1.352	0.043	-
836.5	167300	DFT-s QPSK	A	20	25.0	23.61	-0.13	Right Tilt	0	50	28	1:1	0.038	1.377	0.052	-
836.5	167300	CP QPSK	A	20	23.5	21.81	-0.13	Right Touch	1.5	1	1	1:1	0.088	1.476	0.130	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.30	-0.17	Left Touch	0	1	1	1:1	0.196	1.318	0.258	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.28	0.14	Left Touch	0	50	0	1:1	0.186	1.324	0.246	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.30	0.07	Left Tilt	0	1	1	1:1	0.072	1.318	0.095	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.28	0.17	Left Tilt	0	50	0	1:1	0.067	1.324	0.089	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.30	0.11	Right Touch	0	1	1	1:1	0.392	1.318	0.517	A10
836.5	167300	DFT-s QPSK	E	20	20.5	19.28	0.16	Right Touch	0	50	0	1:1	0.371	1.324	0.491	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.30	-0.11	Right Tilt	0	1	1	1:1	0.126	1.318	0.166	-
836.5	167300	DFT-s QPSK	E	20	20.5	19.28	-0.18	Right Tilt	0	50	0	1:1	0.120	1.324	0.159	-
836.5	167300	CP QPSK	E	20	20.5	19.41	0.13	Right Touch	0	1	1	1:1	0.389	1.285	0.500	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

NR TDD Band n41 Head SAR

Frequency		OFDM Mode	Ant	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.			(Mhz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.46	0.00	Left Touch	0	1	1	1:1	0.019	1.009	0.019	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.25	0.16	Left Touch	0	135	69	1:1	0.070	1.059	0.074	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.46	0.03	Left Tilt	0	1	1	1:1	0.004	1.009	0.004	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.25	0.12	Left Tilt	0	135	69	1:1	0.013	1.059	0.014	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.46	0.00	Right Touch	0	1	1	1:1	0.027	1.009	0.027	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.25	0.15	Right Touch	0	135	69	1:1	0.019	1.059	0.020	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.46	0.12	Right Tilt	0	1	1	1:1	0.007	1.009	0.007	-
2 592.99	518598	DFT-s QPSK	B	100	24.5	24.25	0.03	Right Tilt	0	135	69	1:1	0.005	1.059	0.005	-
2 592.99	518598	CP QPSK	B	100	24.0	23.36	0.16	Left Touch	0.5	1	1	1:1	0.036	1.159	0.042	-
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.79	0.13	Left Touch	0	1	1	1:1	0.521	1.002	0.522	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.78	0.11	Left Touch	0	135	69	1:1	0.502	1.005	0.505	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.54	0.18	Left Touch	0	270	0	1:1	0.508	1.062	0.539	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.79	0.12	Left Tilt	0	1	1	1:1	0.096	1.002	0.096	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.78	0.14	Left Tilt	0	135	69	1:1	0.092	1.005	0.092	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.79	0.17	Right Touch	0	1	1	1:1	0.190	1.002	0.190	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.78	0.17	Right Touch	0	135	69	1:1	0.185	1.005	0.186	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.79	0.15	Right Tilt	0	1	1	1:1	0.040	1.002	0.040	
2 592.99	518598	DFT-s QPSK	I	100	15.8	15.78	0.18	Right Tilt	0	135	69	1:1	0.030	1.005	0.030	
2 592.99	518598	CP QPSK	I	100	15.8	15.79	0.15	Left Touch	0	1	1	1:1	0.571	1.002	0.572	A11
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 n66 Head SAR

Frequency		OFDM Mode	Ant	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)				(W/kg)		(W/kg)	
1 745	349000	DFT-s QPSK	B	40	26.2	25.57	-0.02	Left Touch	0	1	214	1:1	0.048	1.156	0.055	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.44	0.14	Left Touch	0	108	54	1:1	0.048	1.191	0.057	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.57	0.19	Left Tilt	0	1	214	1:1	0.032	1.156	0.037	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.44	0.05	Left Tilt	0	108	54	1:1	0.031	1.191	0.037	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.57	0.00	Right Touch	0	1	214	1:1	0.103	1.156	0.119	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.44	0.00	Right Touch	0	108	54	1:1	0.084	1.191	0.100	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.57	0.12	Right Tilt	0	1	214	1:1	0.012	1.156	0.014	-
1 745	349000	DFT-s QPSK	B	40	26.2	25.44	0.14	Right Tilt	0	108	54	1:1	0.017	1.191	0.020	-
1 745	349000	CP QPSK	B	40	24.7	23.82	0.00	Right Touch	1.5	1	1	1:1	0.032	1.225	0.039	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.28	-0.15	Left Touch	0	1	1	1:1	0.204	1.052	0.215	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.11	0.13	Left Touch	0	108	0	1:1	0.206	1.094	0.225	A12
1 745	349000	DFT-s QPSK	I	40	18.5	18.28	0.09	Left Tilt	0	1	1	1:1	0.040	1.052	0.042	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.11	0.18	Left Tilt	0	108	0	1:1	0.041	1.094	0.045	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.28	-0.02	Right Touch	0	1	1	1:1	0.047	1.052	0.049	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.11	0.14	Right Touch	0	108	0	1:1	0.048	1.094	0.053	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.28	0.11	Right Tilt	0	1	1	1:1	0.022	1.052	0.023	-
1 745	349000	DFT-s QPSK	I	40	18.5	18.11	0.17	Right Tilt	0	108	0	1:1	0.022	1.094	0.024	-
1 745	349000	CP QPSK	I	40	18.5	18.33	0.00	Left Touch	0	1	1	1:1	0.198	1.040	0.206	-
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 – RCV ON

Frequency		Mode	Ant.	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(Mbps)	(dBm)	(dBm)	(dB)			(W/kg)		(Duty)	(W/kg)	
2 437	6	802.11b	G	20	1Mbps	14.5	14.47	-0.16	Left Touch	98.8	0.172	1.007	1.012	0.175	-
2 437	6	802.11b	G	20	1Mbps	14.5	14.47	-0.10	Left Tilt	98.8	0.246	1.007	1.012	0.251	-
2 437	6	802.11b	G	20	1Mbps	14.5	14.47	0.02	Right Touch	98.8	0.308	1.007	1.012	0.314	-
2 437	6	802.11b	G	20	1Mbps	14.5	14.47	-0.08	Right Tilt	98.8	0.301	1.007	1.012	0.307	-
2 437	6	802.11b	H	20	1Mbps	14.5	12.87	0.17	Left Touch	98.8	0.165	1.455	1.012	0.243	-
2 437	6	802.11b	H	20	1Mbps	14.5	12.87	0.11	Left Tilt	98.8	0.109	1.455	1.012	0.161	-
2 437	6	802.11b	H	20	1Mbps	14.5	12.87	0.15	Right Touch	98.8	0.043	1.455	1.012	0.063	-
2 437	6	802.11b	H	20	1Mbps	14.5	12.87	0.00	Right Tilt	98.8	0.037	1.455	1.012	0.054	-
2 437	6	802.11b	G+H	20	1Mbps	17.5	16.75	-0.19	Left Touch	98.8	0.262	1.455	1.012	0.386	-
2 437	6	802.11b	G+H	20	1Mbps	17.5	16.75	0.14	Left Tilt	98.8	0.368	1.455	1.012	0.542	A13
2 437	6	802.11b	G+H	20	1Mbps	17.5	16.75	0.19	Right Touch	98.8	0.294	1.455	1.012	0.433	-
2 437	6	802.11b	G+H	20	1Mbps	17.5	16.75	0.06	Right Tilt	98.8	0.314	1.455	1.012	0.462	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

NII Head SAR – RCV-ON

Frequency 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. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
5 290	58	802.11ac	F	80	MCS0	11.5	11.24	0.00	Left Touch	85.9	0.027	1.062	1.164	0.033	-
5 290	58	802.11ac	F	80	MCS0	11.5	11.24	0.00	Left Tilt	85.9	0.025	1.062	1.164	0.031	-
5 290	58	802.11ac	F	80	MCS0	11.5	11.24	-0.16	Right Touch	85.9	0.108	1.062	1.164	0.134	-
5 290	58	802.11ac	F	80	MCS0	11.5	11.24	0.10	Right Tilt	85.9	0.074	1.062	1.164	0.091	-
5 610	122	802.11ac	F	80	MCS0	11.5	11.49	-0.15	Left Touch	85.9	0.030	1.002	1.164	0.035	-
5 610	122	802.11ac	F	80	MCS0	11.5	11.49	0.00	Left Tilt	85.9	0.018	1.002	1.164	0.021	-
5 610	122	802.11ac	F	80	MCS0	11.5	11.49	0.18	Right Touch	85.9	0.105	1.002	1.164	0.122	-
5 610	122	802.11ac	F	80	MCS0	11.5	11.49	0.12	Right Tilt	85.9	0.048	1.002	1.164	0.056	-
5 775	155	802.11ac	F	80	MCS0	11.5	11.42	0.00	Left Touch	85.9	0.000	1.019	1.164	0.000	-
5 775	155	802.11ac	F	80	MCS0	11.5	11.42	0.00	Left Tilt	85.9	0.000	1.019	1.164	0.000	-
5 775	155	802.11ac	F	80	MCS0	11.5	11.42	0.04	Right Touch	85.9	0.101	1.019	1.164	0.120	-
5 775	155	802.11ac	F	80	MCS0	11.5	11.42	0.00	Right Tilt	85.9	0.032	1.019	1.164	0.038	-
5 855	171	802.11ac	F	80	MCS0	11.5	11.48	0.00	Left Touch	85.9	0.000	1.005	1.164	0.000	-
5 855	171	802.11ac	F	80	MCS0	11.5	11.48	0.00	Left Tilt	85.9	0.000	1.005	1.164	0.000	-
5 855	171	802.11ac	F	80	MCS0	11.5	11.48	0.00	Right Touch	85.9	0.044	1.005	1.164	0.051	-
5 855	171	802.11ac	F	80	MCS0	11.5	11.48	0.00	Right Tilt	85.9	0.026	1.005	1.164	0.030	-
5 290	58	802.11ac	H	80	MCS0	11.5	10.74	-0.14	Left Touch	85.9	0.089	1.191	1.164	0.123	-
5 290	58	802.11ac	H	80	MCS0	11.5	10.74	0.15	Left Tilt	85.9	0.086	1.191	1.164	0.119	-
5 290	58	802.11ac	H	80	MCS0	11.5	10.74	-0.07	Right Touch	85.9	0.038	1.191	1.164	0.053	-
5 290	58	802.11ac	H	80	MCS0	11.5	10.74	0.16	Right Tilt	85.9	0.043	1.191	1.164	0.060	-
5 690	138	802.11ac	H	80	MCS0	11.5	11.44	0.08	Left Touch	85.9	0.167	1.014	1.164	0.197	-
5 690	138	802.11ac	H	80	MCS0	11.5	11.44	0.12	Left Tilt	85.9	0.128	1.014	1.164	0.151	-
5 690	138	802.11ac	H	80	MCS0	11.5	11.44	0.17	Right Touch	85.9	0.076	1.014	1.164	0.090	-
5 690	138	802.11ac	H	80	MCS0	11.5	11.44	0.14	Right Tilt	85.9	0.073	1.014	1.164	0.086	-
5 775	155	802.11ac	H	80	MCS0	11.5	11.02	0.11	Left Touch	85.9	0.109	1.117	1.164	0.142	-
5 775	155	802.11ac	H	80	MCS0	11.5	11.02	0.10	Left Tilt	85.9	0.132	1.117	1.164	0.172	-
5 775	155	802.11ac	H	80	MCS0	11.5	11.02	-0.08	Right Touch	85.9	0.070	1.117	1.164	0.091	-
5 775	155	802.11ac	H	80	MCS0	11.5	11.02	0.15	Right Tilt	85.9	0.078	1.117	1.164	0.101	-
5 855	171	802.11ac	H	80	MCS0	11.5	11.23	-0.18	Left Touch	85.9	0.157	1.064	1.164	0.194	-
5 855	171	802.11ac	H	80	MCS0	11.5	11.23	0.19	Left Tilt	85.9	0.142	1.064	1.164	0.176	-
5 855	171	802.11ac	H	80	MCS0	11.5	11.23	0.10	Right Touch	85.9	0.069	1.064	1.164	0.085	-
5 855	171	802.11ac	H	80	MCS0	11.5	11.23	-0.18	Right Tilt	85.9	0.071	1.064	1.164	0.088	-
5 290	58	802.11ac	F+H	80	MCS0	11.5	10.74	-0.12	Left Touch	85.9	0.049	1.191	1.164	0.068	-
5 290	58	802.11ac	F+H	80	MCS0	11.5	10.74	0.18	Left Tilt	85.9	0.069	1.191	1.164	0.096	-
5 290	58	802.11ac	F+H	80	MCS0	11.5	10.74	0.12	Right Touch	85.9	0.156	1.191	1.164	0.216	-
5 290	58	802.11ac	F+H	80	MCS0	11.5	10.74	0.11	Right Tilt	85.9	0.095	1.191	1.164	0.132	-
5 610	122	802.11ac	F+H	80	MCS0	11.5	11.44	-0.11	Left Touch	85.9	0.117	1.014	1.164	0.138	-
5 610	122	802.11ac	F+H	80	MCS0	11.5	11.44	0.15	Left Tilt	85.9	0.129	1.014	1.164	0.152	-
5 610	122	802.11ac	F+H	80	MCS0	11.5	11.44	0.13	Right Touch	85.9	0.087	1.014	1.164	0.103	-
5 610	122	802.11ac	F+H	80	MCS0	11.5	11.44	0.15	Right Tilt	85.9	0.047	1.014	1.164	0.055	-
5 775	155	802.11ac	F+H	80	MCS0	11.5	11.02	0.17	Left Touch	85.9	0.057	1.117	1.164	0.074	-
5 775	155	802.11ac	F+H	80	MCS0	11.5	11.02	0.13	Left Tilt	85.9	0.132	1.117	1.164	0.172	-
5 775	155	802.11ac	F+H	80	MCS0	11.5	11.02	-0.04	Right Touch	85.9	0.109	1.117	1.164	0.142	-
5 775	155	802.11ac	F+H	80	MCS0	11.5	11.02	0.19	Right Tilt	85.9	0.081	1.117	1.164	0.105	-
5 855	171	802.11ac	F+H	80	MCS0	11.5	11.23	0.13	Left Touch	85.9	0.172	1.064	1.164	0.213	-
5 855	171	802.11ac	F+H	80	MCS0	11.5	11.23	0.18	Left Tilt	85.9	0.178	1.064	1.164	0.220	A14
5 855	171	802.11ac	F+H	80	MCS0	11.5	11.23	-0.08	Right Touch	85.9	0.065	1.064	1.164	0.081	-
5 855	171	802.11ac	F+H	80	MCS0	11.5	11.23	0.04	Right Tilt	85.9	0.066	1.064	1.164	0.082	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

6 GHz Head SAR – RCV-ON

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. SAR	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.										(W/kg)				
6 525	115	802.11ax	F	40	MCS0	11.0	10.69	0.17	Left Touch	99.6	0.039	1.074	1.004	0.042	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.69	0.10	Left Tilt	99.6	0.046	1.074	1.004	0.050	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.69	-0.10	Right Touch	99.6	0.065	1.074	1.004	0.070	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.69	-0.14	Right Tilt	99.6	0.047	1.074	1.004	0.051	-
5 965	3	802.11ax	F	40	MCS0	11.0	10.05	-0.16	Right Touch	99.6	0.071	1.245	1.004	0.089	-
6 165	43	802.11ax	F	40	MCS0	11.0	10.66	0.11	Right Touch	99.6	0.095	1.081	1.004	0.103	-
6 845	179	802.11ax	F	40	MCS0	11.0	10.23	-0.14	Right Touch	99.6	0.051	1.194	1.004	0.061	-
7 085	227	802.11ax	F	40	MCS0	11.0	9.87	-0.12	Right Touch	99.6	0.032	1.297	1.004	0.042	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	-0.10	Left Touch	99.6	0.058	1.059	1.004	0.062	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	0.19	Left Tilt	99.6	0.055	1.059	1.004	0.058	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	-0.19	Right Touch	99.6	0.020	1.059	1.004	0.021	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	0.14	Right Tilt	99.6	0.015	1.059	1.004	0.016	-
5 965	3	802.11ax	H	40	MCS0	11.0	10.11	-0.11	Left Touch	99.6	0.104	1.227	1.004	0.128	A15
6 165	43	802.11ax	H	40	MCS0	11.0	9.92	-0.13	Left Touch	99.6	0.063	1.282	1.004	0.081	-
6 525	115	802.11ax	H	40	MCS0	11.0	10.14	0.15	Left Touch	99.6	0.060	1.219	1.004	0.073	-
6 845	179	802.11ax	H	40	MCS0	11.0	10.22	-0.17	Left Touch	99.6	0.067	1.197	1.004	0.081	-
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 – RCV ON

Frequency		Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. SAR	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.							(W/kg)				
2 480	78	DH5	G	15.5	14.84	0.16	Left Touch	0.097	1.164	1.013	0.114	-
2 480	78	DH5	G	15.5	14.84	-0.01	Left Tilt	0.133	1.164	1.013	0.157	-
2 480	78	DH5	G	15.5	14.84	-0.05	Right Touch	0.230	1.164	1.013	0.271	-
2 480	78	DH5	G	15.5	14.84	0.15	Right Tilt	0.272	1.164	1.013	0.321	A16
2 441	39	DH5	H	15.5	13.87	0.14	Left Touch	0.234	1.455	1.013	0.345	-
2 441	39	DH5	H	15.5	13.87	0.12	Left Tilt	0.146	1.455	1.013	0.215	-
2 441	39	DH5	H	15.5	13.87	0.00	Right Touch	0.071	1.455	1.013	0.105	-
2 441	39	DH5	H	15.5	13.87	0.15	Right Tilt	0.056	1.455	1.013	0.083	-
2 480	78	DH5	G+H	16.0	15.48	-0.18	Left Touch	0.125	1.127	1.013	0.143	-
2 480	78	DH5	G+H	16.0	15.48	0.12	Left Tilt	0.137	1.127	1.013	0.156	-
2 480	78	DH5	G+H	16.0	15.48	0.19	Right Touch	0.134	1.127	1.013	0.153	-
2 480	78	DH5	G+H	16.0	15.48	0.17	Right Tilt	0.138	1.127	1.013	0.158	-
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 Body worn/Hotspot SAR Measurement Results

GSM 850 Bodyworn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
836.6	190	GPRS 4Tx	A	Open	25.70	23.85	-0.16	Rear	1:2.08	5	0.561	1.531	0.859	-
824.2	128	GPRS 4Tx	A	Open	25.70	23.76	0.03	Rear	1:2.08	5	0.513	1.563	0.802	-
848.8	251	GPRS 4Tx	A	Open	25.70	23.71	0.01	Rear	1:2.08	5	0.495	1.581	0.783	-
836.6	190	GPRS 4Tx	A	Open	25.70	23.85	-0.13	Front	1:2.08	5	0.374	1.531	0.573	-
836.6	190	GPRS 4Tx	A	Open	25.70	23.85	0.01	Right	1:2.08	5	0.353	1.531	0.540	-
836.6	190	GPRS 4Tx	A	Open	25.70	23.85	0.02	Bottom	1:2.08	5	0.491	1.531	0.752	-
836.6	190	Voice	A	Open	31.70	30.01	0.03	Rear	1:8.3	5	0.642	1.476	0.948	B1
824.2	128	Voice	A	Open	31.70	29.97	-0.07	Rear	1:8.3	5	0.586	1.489	0.873	-
848.8	251	Voice	A	Open	31.70	29.98	0.07	Rear	1:8.3	5	0.611	1.486	0.908	-
836.6	190	Voice	A	Open	31.70	30.01	0.00	Front	1:8.3	5	0.362	1.476	0.534	-
836.6	190	GPRS 4Tx	A	Close	25.70	23.85	-0.10	Rear	1:2.08	5	0.311	1.531	0.476	-
836.6	190	GPRS 4Tx	A	Close	25.70	23.85	-0.03	Front	1:2.08	5	0.027	1.531	0.041	-
836.6	190	GPRS 4Tx	A	Close	25.70	23.85	0.00	Right	1:2.08	5	0.293	1.531	0.449	-
836.6	190	GPRS 4Tx	A	Close	25.70	23.85	-0.04	Bottom	1:2.08	5	0.390	1.531	0.597	-
836.6	190	Voice	A	Close	31.70	30.01	-0.19	Rear	1:8.3	5	0.400	1.476	0.590	-
836.6	190	Voice	A	Close	31.70	30.01	-0.18	Front	1:8.3	5	0.038	1.476	0.056	-
836.6	190	GPRS 4Tx	E	Open	23.70	22.25	0.06	Rear	1:2.08	5	0.341	1.396	0.476	-
836.6	190	GPRS 4Tx	E	Open	23.70	22.25	-0.12	Front	1:2.08	5	0.130	1.396	0.181	-
836.6	190	GPRS 4Tx	E	Open	23.70	22.25	0.05	Left	1:2.08	5	0.434	1.396	0.606	-
836.6	190	GPRS 4Tx	E	Open	23.70	22.25	-0.12	Top	1:2.08	5	0.028	1.396	0.039	-
836.6	190	Voice	E	Open	29.70	28.64	-0.04	Rear	1:8.3	5	0.397	1.276	0.507	-
836.6	190	Voice	E	Open	29.70	28.64	-0.01	Front	1:8.3	5	0.199	1.276	0.254	-
836.6	190	GPRS 4Tx	E	Close	23.70	22.25	-0.15	Rear	1:2.08	5	0.046	1.396	0.064	-
836.6	190	GPRS 4Tx	E	Close	23.70	22.25	-0.04	Front	1:2.08	5	0.188	1.396	0.262	-
836.6	190	GPRS 4Tx	E	Close	23.70	22.25	-0.05	Left	1:2.08	5	0.282	1.396	0.394	-
836.6	190	GPRS 4Tx	E	Close	23.70	22.25	-0.12	Top	1:2.08	5	0.013	1.396	0.018	-
836.6	190	GPRS 4Tx	E	Close	23.70	22.25	-0.07	Bottom	1:2.08	5	0.022	1.396	0.031	-
836.6	190	Voice	E	Close	29.70	28.64	-0.12	Rear	1:8.3	5	0.053	1.276	0.068	-
836.6	190	Voice	E	Close	29.70	28.64	0.00	Front	1:8.3	5	0.204	1.276	0.260	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

GSM 1900 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
1880.0	661	GPRS 4Tx	B	Open	23.2	21.49	0.11	Rear	1:2.08	5	0.436	1.483	0.660	-
1880.0	661	GPRS 4Tx	B	Open	23.2	21.49	0.16	Front	1:2.08	5	0.362	1.483	0.537	-
1880.0	661	GPRS 4Tx	B	Open	23.2	21.49	0.19	Left	1:2.08	5	0.297	1.483	0.440	-
1880.0	661	GPRS 4Tx	B	Open	23.2	21.49	0.07	Bottom	1:2.08	5	0.666	1.483	0.988	B2
1850.2	512	GPRS 4Tx	B	Open	23.2	21.41	0.02	Bottom	1:2.08	5	0.539	1.510	0.814	-
1909.8	810	GPRS 4Tx	B	Open	23.2	21.37	0.04	Bottom	1:2.08	5	0.605	1.524	0.922	-
1909.8	810	Voice	B	Open	29.2	27.65	0.17	Rear	1:8.3	5	0.445	1.429	0.636	-
1909.8	810	Voice	B	Open	29.2	27.65	0.18	Front	1:8.3	5	0.345	1.429	0.493	-
1880.0	661	GPRS 4Tx	B	Close	23.2	21.49	-0.03	Rear	1:2.08	5	0.336	1.483	0.498	-
1880.0	661	GPRS 4Tx	B	Close	23.2	21.49	-0.16	Front	1:2.08	5	0.083	1.483	0.123	-
1880.0	661	GPRS 4Tx	B	Close	23.2	21.49	0.07	Left	1:2.08	5	0.175	1.483	0.260	-
1880.0	661	GPRS 4Tx	B	Close	23.2	21.49	-0.05	Bottom	1:2.08	5	0.610	1.483	0.905	-
1850.2	512	GPRS 4Tx	B	Close	23.2	21.41	0.06	Bottom	1:2.08	5	0.468	1.510	0.707	-
1909.8	810	GPRS 4Tx	B	Close	23.2	21.37	0.06	Bottom	1:2.08	5	0.433	1.524	0.660	-
1909.8	810	Voice	B	Close	29.2	27.65	-0.10	Rear	1:8.3	5	0.367	1.429	0.524	-
1909.8	810	Voice	B	Close	29.2	27.65	-0.14	Front	1:8.3	5	0.070	1.429	0.100	-
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 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(dB)	(dB)	(dB)			(mm)	(W/kg)		(W/kg)	
836.6	4183	RMC	A	Open	24.0	22.52	-0.07	Rear	1:1	5	0.853	1.406	1.199	B3
826.4	4132	RMC	A	Open	24.0	22.53	-0.09	Rear	1:1	5	0.813	1.406	1.141	-
846.6	4233	RMC	A	Open	24.0	22.48	-0.06	Rear	1:1	5	0.825	1.406	1.171	-
836.6	4183	RMC	A	Open	24.0	22.52	-0.12	Front	1:1	5	0.353	1.406	0.496	-
836.6	4183	RMC	A	Open	24.0	22.52	-0.17	Right	1:1	5	0.476	1.403	0.669	-
836.6	4183	RMC	A	Open	24.0	22.52	-0.02	Bottom	1:1	5	0.723	1.419	1.017	-
826.4	4132	RMC	A	Open	24.0	22.53	0.01	Bottom	1:1	5	0.793	1.403	1.113	-
846.6	4233	RMC	A	Open	24.0	22.48	0.06	Bottom	1:1	5	0.507	1.419	0.719	-
836.6	4183	RMC	A	Open	24.0	22.52	-0.13	Rear	1:1	5	0.818	1.406	1.150	#
836.6	4183	RMC	A	Close	24.0	22.52	-0.12	Rear	1:1	5	0.535	1.406	0.752	-
836.6	4183	RMC	A	Close	24.0	22.52	-0.09	Front	1:1	5	0.094	1.406	0.132	-
836.6	4183	RMC	A	Close	24.0	22.52	-0.14	Right	1:1	5	0.267	1.406	0.375	-
836.6	4183	RMC	A	Close	24.0	22.52	-0.15	Bottom	1:1	5	0.327	1.406	0.460	-
836.6	4183	RMC	E	Open	20.0	19.16	-0.03	Rear	1:1	5	0.378	1.213	0.459	-
836.6	4183	RMC	E	Open	20.0	19.16	0.03	Front	1:1	5	0.334	1.213	0.405	-
836.6	4183	RMC	E	Open	20.0	19.16	-0.01	Left	1:1	5	0.516	1.213	0.626	-
836.6	4183	RMC	E	Open	20.0	19.16	-0.02	Top	1:1	5	0.032	1.213	0.039	-
836.6	4183	RMC	E	Close	20.0	19.16	-0.04	Rear	1:1	5	0.088	1.213	0.107	-
836.6	4183	RMC	E	Close	20.0	19.16	-0.08	Front	1:1	5	0.320	1.213	0.388	-
836.6	4183	RMC	E	Close	20.0	19.16	-0.02	Left	1:1	5	0.297	1.213	0.360	-
836.6	4183	RMC	E	Close	20.0	19.16	-0.10	Top	1:1	5	0.016	1.213	0.019	-
836.6	4183	RMC	E	Close	20.0	19.16	0.10	Bottom	1:1	5	0.022	1.213	0.027	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

Note: # Data entry indicate Variability measurement.

LTE FDD Band 2 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
1 860	18700	QPSK	B	Open	20	20.5	18.86	-0.10	Rear	0	1	99	1:1	5	0.522	1.459	0.762	-
1 860	18700	QPSK	B	Open	20	20.5	18.80	0.15	Rear	0	50	49	1:1	5	0.538	1.479	0.796	-
1 860	18700	QPSK	B	Open	20	20.5	18.86	-0.15	Front	0	1	99	1:1	5	0.339	1.459	0.495	-
1 860	18700	QPSK	B	Open	20	20.5	18.80	0.05	Front	0	50	49	1:1	5	0.347	1.479	0.513	-
1 860	18700	QPSK	B	Open	20	20.5	18.86	-0.13	Left	0	1	99	1:1	5	0.238	1.459	0.347	-
1 860	18700	QPSK	B	Open	20	20.5	18.80	0.15	Left	0	50	49	1:1	5	0.239	1.479	0.353	-
1 860	18700	QPSK	B	Open	20	20.5	18.86	-0.01	Bottom	0	1	99	1:1	5	0.790	1.459	1.153	B4
1 880	18900	QPSK	B	Open	20	20.5	18.79	-0.02	Bottom	0	1	49	1:1	5	0.753	1.483	1.117	-
1 900	19100	QPSK	B	Open	20	20.5	18.83	-0.01	Bottom	0	1	49	1:1	5	0.705	1.469	1.036	-
1 860	18700	QPSK	B	Open	20	20.5	18.80	-0.01	Bottom	0	50	49	1:1	5	0.763	1.479	1.128	-
1 880	18900	QPSK	B	Open	20	20.5	18.71	0.00	Bottom	0	50	0	1:1	5	0.752	1.510	1.136	-
1 900	19100	QPSK	B	Open	20	20.5	18.79	-0.01	Bottom	0	50	0	1:1	5	0.710	1.483	1.053	-
1 860	18700	QPSK	B	Open	20	20.5	18.80	-0.01	Bottom	0	100	0	1:1	5	0.758	1.479	1.121	-
1 860	18700	QPSK	B	Close	20	20.5	18.86	-0.10	Rear	0	1	99	1:1	5	0.348	1.459	0.508	-
1 860	18700	QPSK	B	Close	20	20.5	18.80	0.04	Rear	0	50	49	1:1	5	0.358	1.479	0.529	-
1 860	18700	QPSK	B	Close	20	20.5	18.86	-0.16	Front	0	1	99	1:1	5	0.105	1.459	0.153	-
1 860	18700	QPSK	B	Close	20	20.5	18.80	-0.14	Front	0	50	49	1:1	5	0.116	1.479	0.172	-
1 860	18700	QPSK	B	Close	20	20.5	18.86	-0.07	Left	0	1	99	1:1	5	0.163	1.459	0.238	-
1 860	18700	QPSK	B	Close	20	20.5	18.80	-0.05	Left	0	50	49	1:1	5	0.164	1.479	0.243	-
1 860	18700	QPSK	B	Close	20	20.5	18.86	-0.03	Bottom	0	1	99	1:1	5	0.682	1.459	0.995	-
1 880	18900	QPSK	B	Close	20	20.5	18.79	0.00	Bottom	0	1	49	1:1	5	0.640	1.483	0.949	-
1 900	19100	QPSK	B	Close	20	20.5	18.83	-0.01	Bottom	0	1	49	1:1	5	0.656	1.469	0.964	-
1 860	18700	QPSK	B	Close	20	20.5	18.80	0.01	Bottom	0	50	49	1:1	5	0.703	1.479	1.040	-
1 880	18900	QPSK	B	Close	20	20.5	18.71	0.01	Bottom	0	50	0	1:1	5	0.637	1.510	0.962	-
1 900	19100	QPSK	B	Close	20	20.5	18.79	-0.01	Bottom	0	50	0	1:1	5	0.652	1.483	0.967	-
1 860	18700	QPSK	B	Close	20	20.5	18.80	0.00	Bottom	0	100	0	1:1	5	0.707	1.479	1.046	-
1 860	18700	QPSK	I	Open	20	19.5	18.43	0.00	Rear	0	1	49	1:1	5	0.160	1.279	0.205	-
1 860	18700	QPSK	I	Open	20	19.5	18.38	-0.10	Rear	0	50	49	1:1	5	0.160	1.294	0.207	-
1 860	18700	QPSK	I	Open	20	19.5	18.43	0.12	Front	0	1	49	1:1	5	0.123	1.279	0.157	-
1 860	18700	QPSK	I	Open	20	19.5	18.38	0.12	Front	0	50	49	1:1	5	0.122	1.294	0.158	-
1 860	18700	QPSK	I	Open	20	19.5	18.43	0.12	Right	0	1	49	1:1	5	0.307	1.279	0.393	-
1 860	18700	QPSK	I	Open	20	19.5	18.38	-0.14	Right	0	50	49	1:1	5	0.299	1.294	0.387	-
1 860	18700	QPSK	I	Open	20	19.5	18.43	0.15	Top	0	1	49	1:1	5	0.037	1.279	0.047	-
1 860	18700	QPSK	I	Open	20	19.5	18.38	-0.15	Top	0	50	49	1:1	5	0.036	1.294	0.047	-
1 860	18700	QPSK	I	Close	20	19.5	18.43	-0.11	Rear	0	1	49	1:1	5	0.038	1.279	0.049	-
1 860	18700	QPSK	I	Close	20	19.5	18.38	-0.18	Rear	0	50	49	1:1	5	0.038	1.294	0.049	-
1 860	18700	QPSK	I	Close	20	19.5	18.43	0.18	Front	0	1	49	1:1	5	0.132	1.279	0.169	-
1 860	18700	QPSK	I	Close	20	19.5	18.38	-0.19	Front	0	50	49	1:1	5	0.133	1.294	0.172	-
1 860	18700	QPSK	I	Close	20	19.5	18.43	0.05	Right	0	1	49	1:1	5	0.259	1.279	0.331	-
1 860	18700	QPSK	I	Close	20	19.5	18.38	0.02	Right	0	50	49	1:1	5	0.260	1.294	0.336	-
1 860	18700	QPSK	I	Close	20	19.5	18.43	0.00	Top	0	1	49	1:1	5	0.000	1.279	0.000	-
1 860	18700	QPSK	I	Close	20	19.5	18.38	0.00	Top	0	50	49	1:1	5	0.000	1.294	0.000	-
1 860	18700	QPSK	I	Close	20	19.5	18.43	-0.19	Bottom	0	1	49	1:1	5	0.025	1.279	0.032	-
1 860	18700	QPSK	I	Close	20	19.5	18.38	0.07	Bottom	0	50	49	1:1	5	0.025	1.294	0.032	-
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 5 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.																	
836.5	20525	QPSK	A	Open	10	22.5	21.83	-0.06	Rear	0	1	24	1:1	5	0.835	1.167	0.974	B5
836.5	20525	QPSK	A	Open	10	22.5	21.20	-0.11	Rear	0	25	0	1:1	5	0.730	1.349	0.985	-
836.5	20525	QPSK	A	Open	10	22.5	21.02	-0.06	Rear	0	50	0	1:1	5	0.713	1.406	1.002	-
836.5	20525	QPSK	A	Open	10	22.5	21.83	0.17	Front	0	1	24	1:1	5	0.599	1.167	0.699	-
836.5	20525	QPSK	A	Open	10	22.5	21.20	-0.08	Front	0	25	0	1:1	5	0.536	1.349	0.723	-
836.5	20525	QPSK	A	Open	10	22.5	21.83	-0.09	Right	0	1	24	1:1	5	0.482	1.167	0.562	-
836.5	20525	QPSK	A	Open	10	22.5	21.20	-0.07	Right	0	25	0	1:1	5	0.332	1.349	0.448	-
836.5	20525	QPSK	A	Open	10	22.5	21.83	0.00	Bottom	0	1	24	1:1	5	0.763	1.167	0.890	-
836.5	20525	QPSK	A	Open	10	22.5	21.20	-0.05	Bottom	0	25	0	1:1	5	0.631	1.349	0.851	-
836.5	20525	QPSK	A	Open	10	22.5	21.02	0.03	Bottom	0	50	0	1:1	5	0.667	1.406	0.938	-
836.5	20525	QPSK	A	Open	10	22.5	21.83	-0.01	Rear	0	1	24	1:1	5	0.834	1.167	0.973	#
836.5	20525	QPSK	A	Close	10	22.5	21.83	-0.02	Rear	0	1	24	1:1	5	0.735	1.167	0.858	-
836.5	20525	QPSK	A	Close	10	22.5	21.20	-0.03	Rear	0	25	0	1:1	5	0.603	1.349	0.813	-
836.5	20525	QPSK	A	Close	10	22.5	21.02	0.02	Rear	0	50	0	1:1	5	0.612	1.406	0.860	-
836.5	20525	QPSK	A	Close	10	22.5	21.83	-0.05	Front	0	1	24	1:1	5	0.095	1.167	0.111	-
836.5	20525	QPSK	A	Close	10	22.5	21.20	-0.07	Front	0	25	0	1:1	5	0.079	1.349	0.107	-
836.5	20525	QPSK	A	Close	10	22.5	21.83	0.03	Right	0	1	24	1:1	5	0.374	1.167	0.436	-
836.5	20525	QPSK	A	Close	10	22.5	21.20	-0.07	Right	0	25	0	1:1	5	0.338	1.349	0.456	-
836.5	20525	QPSK	A	Close	10	22.5	21.83	-0.10	Bottom	0	1	24	1:1	5	0.566	1.167	0.661	-
836.5	20525	QPSK	A	Close	10	22.5	21.20	-0.13	Bottom	0	25	24	1:1	5	0.473	1.349	0.638	-
836.5	20525	QPSK	E	Open	10	20.5	19.22	0.08	Rear	0	1	24	1:1	5	0.306	1.343	0.411	-
836.5	20525	QPSK	E	Open	10	20.5	19.05	0.17	Rear	0	25	24	1:1	5	0.270	1.396	0.377	-
836.5	20525	QPSK	E	Open	10	20.5	19.22	-0.12	Front	0	1	24	1:1	5	0.403	1.343	0.541	-
836.5	20525	QPSK	E	Open	10	20.5	19.05	-0.12	Front	0	25	24	1:1	5	0.390	1.396	0.544	-
836.5	20525	QPSK	E	Open	10	20.5	19.22	-0.01	Left	0	1	24	1:1	5	0.486	1.343	0.653	-
836.5	20525	QPSK	E	Open	10	20.5	19.05	-0.02	Left	0	25	24	1:1	5	0.477	1.396	0.666	-
836.5	20525	QPSK	E	Open	10	20.5	19.22	-0.13	Top	0	1	24	1:1	5	0.029	1.343	0.039	-
836.5	20525	QPSK	E	Open	10	20.5	19.05	-0.06	Top	0	25	24	1:1	5	0.030	1.396	0.042	-
836.5	20525	QPSK	E	Close	10	20.5	19.22	-0.07	Rear	0	1	24	1:1	5	0.107	1.343	0.144	-
836.5	20525	QPSK	E	Close	10	20.5	19.05	-0.12	Rear	0	25	24	1:1	5	0.107	1.396	0.149	-
836.5	20525	QPSK	E	Close	10	20.5	19.22	-0.07	Front	0	1	24	1:1	5	0.291	1.343	0.391	-
836.5	20525	QPSK	E	Close	10	20.5	19.05	-0.12	Front	0	25	24	1:1	5	0.287	1.396	0.401	-
836.5	20525	QPSK	E	Close	10	20.5	19.22	0.00	Left	0	1	24	1:1	5	0.295	1.343	0.396	-
836.5	20525	QPSK	E	Close	10	20.5	19.05	-0.01	Left	0	25	24	1:1	5	0.287	1.396	0.401	-
836.5	20525	QPSK	E	Close	10	20.5	19.22	0.02	Top	0	1	24	1:1	5	0.012	1.343	0.016	-
836.5	20525	QPSK	E	Close	10	20.5	19.05	-0.13	Top	0	25	24	1:1	5	0.015	1.396	0.021	-
836.5	20525	QPSK	E	Close	10	20.5	19.22	-0.16	Bottom	0	1	24	1:1	5	0.024	1.343	0.032	-
836.5	20525	QPSK	E	Close	10	20.5	19.05	-0.03	Bottom	0	25	24	1:1	5	0.024	1.396	0.034	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram								

Note: # Data entry indicate Variability measurement.

LTE FDD Band 12 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.																	
(MHz)	(dBm)	(dBm)	(dB)	(dB)	(mm)	(W/kg)	(W/kg)											
707.5	23095	QPSK	A	Open	10	22.5	22.37	-0.12	Rear	0	1	24	1:1	5	0.684	1.030	0.705	B6
707.5	23095	QPSK	A	Open	10	22.5	21.53	-0.06	Rear	0	25	0	1:1	5	0.554	1.250	0.693	-
707.5	23095	QPSK	A	Open	10	22.5	22.37	-0.02	Front	0	1	24	1:1	5	0.419	1.030	0.432	-
707.5	23095	QPSK	A	Open	10	22.5	21.53	-0.09	Front	0	25	0	1:1	5	0.338	1.250	0.423	-
707.5	23095	QPSK	A	Open	10	22.5	22.37	-0.02	Right	0	1	24	1:1	5	0.351	1.030	0.362	-
707.5	23095	QPSK	A	Open	10	22.5	21.53	-0.05	Right	0	25	0	1:1	5	0.244	1.250	0.305	-
707.5	23095	QPSK	A	Open	10	22.5	22.37	-0.02	Bottom	0	1	24	1:1	5	0.571	1.030	0.588	-
707.5	23095	QPSK	A	Open	10	22.5	21.53	-0.02	Bottom	0	25	0	1:1	5	0.445	1.250	0.556	-
707.5	23095	QPSK	A	Close	10	22.5	22.37	-0.04	Rear	0	1	24	1:1	5	0.643	1.030	0.662	-
707.5	23095	QPSK	A	Close	10	22.5	21.53	-0.01	Rear	0	25	0	1:1	5	0.522	1.250	0.653	-
707.5	23095	QPSK	A	Close	10	22.5	22.37	-0.12	Front	0	1	24	1:1	5	0.071	1.030	0.073	-
707.5	23095	QPSK	A	Close	10	22.5	21.53	-0.17	Front	0	25	0	1:1	5	0.055	1.250	0.069	-
707.5	23095	QPSK	A	Close	10	22.5	22.37	-0.11	Right	0	1	24	1:1	5	0.265	1.030	0.273	-
707.5	23095	QPSK	A	Close	10	22.5	21.53	0.00	Right	0	25	0	1:1	5	0.254	1.250	0.318	-
707.5	23095	QPSK	A	Close	10	22.5	22.37	-0.12	Bottom	0	1	24	1:1	5	0.440	1.030	0.453	-
707.5	23095	QPSK	A	Close	10	22.5	21.53	-0.02	Bottom	0	25	0	1:1	5	0.359	1.250	0.449	-
707.5	23095	QPSK	E	Open	10	19.0	18.04	-0.18	Rear	0	1	24	1:1	5	0.173	1.247	0.216	-
707.5	23095	QPSK	E	Open	10	19.0	17.99	-0.01	Rear	0	25	12	1:1	5	0.159	1.262	0.201	-
707.5	23095	QPSK	E	Open	10	19.0	18.04	-0.14	Front	0	1	24	1:1	5	0.238	1.247	0.297	-
707.5	23095	QPSK	E	Open	10	19.0	17.99	-0.12	Front	0	25	12	1:1	5	0.228	1.262	0.288	-
707.5	23095	QPSK	E	Open	10	19.0	18.04	-0.05	Left	0	1	24	1:1	5	0.298	1.247	0.372	-
707.5	23095	QPSK	E	Open	10	19.0	17.99	-0.01	Left	0	25	12	1:1	5	0.287	1.262	0.362	-
707.5	23095	QPSK	E	Open	10	19.0	18.04	0.06	Top	0	1	24	1:1	5	0.025	1.247	0.031	-
707.5	23095	QPSK	E	Open	10	19.0	17.99	-0.15	Top	0	25	12	1:1	5	0.024	1.262	0.030	-
707.5	23095	QPSK	E	Close	10	19.0	18.04	0.10	Rear	0	1	24	1:1	5	0.048	1.247	0.060	-
707.5	23095	QPSK	E	Close	10	19.0	17.99	-0.06	Rear	0	25	12	1:1	5	0.046	1.262	0.058	-
707.5	23095	QPSK	E	Close	10	19.0	18.04	-0.07	Front	0	1	24	1:1	5	0.153	1.247	0.191	-
707.5	23095	QPSK	E	Close	10	19.0	17.99	0.01	Front	0	25	12	1:1	5	0.148	1.262	0.187	-
707.5	23095	QPSK	E	Close	10	19.0	18.04	-0.04	Left	0	1	24	1:1	5	0.184	1.247	0.229	-
707.5	23095	QPSK	E	Close	10	19.0	17.99	0.00	Left	0	25	12	1:1	5	0.178	1.262	0.225	-
707.5	23095	QPSK	E	Close	10	19.0	18.04	-0.16	Top	0	1	24	1:1	5	0.007	1.247	0.009	-
707.5	23095	QPSK	E	Close	10	19.0	17.99	-0.12	Top	0	25	12	1:1	5	0.008	1.262	0.010	-
707.5	23095	QPSK	E	Close	10	19.0	18.04	0.05	Bottom	0	1	24	1:1	5	0.019	1.247	0.024	-
707.5	23095	QPSK	E	Close	10	19.0	17.99	-0.14	Bottom	0	25	12	1:1	5	0.018	1.262	0.023	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 13 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.																	
782	23230	QPSK	A	Open	10	22.5	22.15	-0.07	Rear	0	1	24	1:1	5	1.020	1.084	1.106	B7
782	23230	QPSK	A	Open	10	22.5	21.32	-0.10	Rear	0	25	24	1:1	5	0.862	1.312	1.131	-
782	23230	QPSK	A	Open	10	22.5	21.26	-0.06	Rear	0	50	0	1:1	5	0.895	1.330	1.190	-
782	23230	QPSK	A	Open	10	22.5	22.15	-0.09	Front	0	1	24	1:1	5	0.711	1.084	0.771	-
782	23230	QPSK	A	Open	10	22.5	21.32	-0.08	Front	0	25	24	1:1	5	0.592	1.312	0.777	-
782	23230	QPSK	A	Open	10	22.5	22.15	0.00	Right	0	1	24	1:1	5	0.533	1.084	0.578	-
782	23230	QPSK	A	Open	10	22.5	21.32	-0.02	Right	0	25	24	1:1	5	0.392	1.312	0.514	-
782	23230	QPSK	A	Open	10	22.5	22.15	-0.01	Bottom	0	1	24	1:1	5	0.955	1.084	1.035	-
782	23230	QPSK	A	Open	10	22.5	21.32	-0.03	Bottom	0	25	24	1:1	5	0.747	1.312	0.980	-
782	23230	QPSK	A	Open	10	22.5	21.26	-0.03	Bottom	0	50	0	1:1	5	0.770	1.330	1.024	-
782	23230	QPSK	A	Open	10	22.5	22.15	-0.04	Rear	0	1	24	1:1	5	0.987	1.084	1.070	#
782	23230	QPSK	A	Close	10	22.5	22.15	0.12	Rear	0	1	24	1:1	5	0.588	1.084	0.637	-
782	23230	QPSK	A	Close	10	22.5	21.32	-0.05	Rear	0	25	24	1:1	5	0.499	1.312	0.655	-
782	23230	QPSK	A	Close	10	22.5	22.15	-0.04	Front	0	1	24	1:1	5	0.082	1.084	0.089	-
782	23230	QPSK	A	Close	10	22.5	21.32	-0.07	Front	0	25	24	1:1	5	0.073	1.312	0.096	-
782	23230	QPSK	A	Close	10	22.5	22.15	-0.05	Right	0	1	24	1:1	5	0.554	1.084	0.601	-
782	23230	QPSK	A	Close	10	22.5	21.32	-0.01	Right	0	25	24	1:1	5	0.459	1.312	0.602	-
782	23230	QPSK	A	Close	10	22.5	22.15	0.01	Bottom	0	1	24	1:1	5	0.674	1.084	0.731	-
782	23230	QPSK	A	Close	10	22.5	21.32	-0.10	Bottom	0	25	24	1:1	5	0.566	1.312	0.743	-
782	23230	QPSK	E	Open	10	18.5	17.31	-0.08	Rear	0	1	24	1:1	5	0.168	1.315	0.221	-
782	23230	QPSK	E	Open	10	18.5	17.29	-0.13	Rear	0	25	24	1:1	5	0.155	1.321	0.205	-
782	23230	QPSK	E	Open	10	18.5	17.31	0.07	Front	0	1	24	1:1	5	0.197	1.315	0.259	-
782	23230	QPSK	E	Open	10	18.5	17.29	-0.06	Front	0	25	24	1:1	5	0.183	1.321	0.242	-
782	23230	QPSK	E	Open	10	18.5	17.31	0.01	Left	0	1	24	1:1	5	0.279	1.315	0.367	-
782	23230	QPSK	E	Open	10	18.5	17.29	-0.03	Left	0	25	24	1:1	5	0.269	1.321	0.355	-
782	23230	QPSK	E	Open	10	18.5	17.31	-0.16	Top	0	1	24	1:1	5	0.017	1.315	0.022	-
782	23230	QPSK	E	Open	10	18.5	17.29	-0.14	Top	0	25	24	1:1	5	0.016	1.321	0.021	-
782	23230	QPSK	E	Close	10	18.5	17.31	-0.16	Rear	0	1	24	1:1	5	0.034	1.315	0.045	-
782	23230	QPSK	E	Close	10	18.5	17.29	-0.15	Rear	0	25	24	1:1	5	0.033	1.321	0.044	-
782	23230	QPSK	E	Close	10	18.5	17.31	-0.19	Front	0	1	24	1:1	5	0.117	1.315	0.154	-
782	23230	QPSK	E	Close	10	18.5	17.29	-0.10	Front	0	25	24	1:1	5	0.111	1.321	0.147	-
782	23230	QPSK	E	Close	10	18.5	17.31	-0.04	Left	0	1	24	1:1	5	0.121	1.315	0.159	-
782	23230	QPSK	E	Close	10	18.5	17.29	-0.04	Left	0	25	24	1:1	5	0.113	1.321	0.149	-
782	23230	QPSK	E	Close	10	18.5	17.31	-0.14	Top	0	1	24	1:1	5	0.005	1.315	0.007	-
782	23230	QPSK	E	Close	10	18.5	17.29	-0.18	Top	0	25	24	1:1	5	0.004	1.321	0.005	-
782	23230	QPSK	E	Close	10	18.5	17.31	0.08	Bottom	0	1	24	1:1	5	0.013	1.315	0.017	-
782	23230	QPSK	E	Close	10	18.5	17.29	0.05	Bottom	0	25	24	1:1	5	0.012	1.321	0.016	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram								

Note: # Data entry indicate Variability measurement.

LTE TDD Band 41 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.				(Mhz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
2 680	41490	QPSK	B	Open	20	22.5	21.63	0.14	Rear	0	1	0	1:1.58	5	0.771	1.222	0.942	B8
2 506	39750	QPSK	B	Open	20	22.5	21.32	0.11	Rear	0	1	0	1:1.58	5	0.660	1.312	0.866	-
2 549.6	40185	QPSK	B	Open	20	22.5	21.47	0.02	Rear	0	1	0	1:1.58	5	0.697	1.268	0.884	-
2 593	40620	QPSK	B	Open	20	22.5	21.38	0.19	Rear	0	1	0	1:1.58	5	0.668	1.294	0.864	-
2 636.5	41055	QPSK	B	Open	20	22.5	21.35	0.10	Rear	0	1	99	1:1.58	5	0.756	1.303	0.985	-
2 680	41490	QPSK	B	Open	20	22.5	21.64	-0.06	Rear	0	50	0	1:1.58	5	0.764	1.219	0.931	-
2 506	39750	QPSK	B	Open	20	22.5	21.33	-0.13	Rear	0	50	49	1:1.58	5	0.651	1.309	0.852	-
2 549.6	40185	QPSK	B	Open	20	22.5	21.44	0.18	Rear	0	50	0	1:1.58	5	0.661	1.276	0.843	-
2 593	40620	QPSK	B	Open	20	22.5	21.25	0.12	Rear	0	50	0	1:1.58	5	0.665	1.334	0.887	
2 636.5	41055	QPSK	B	Open	20	22.5	21.34	0.00	Rear	0	50	49	1:1.58	5	0.745	1.306	0.973	
2 680	41490	QPSK	B	Open	20	22.5	21.59	-0.17	Rear	0	100	0	1:1.58	5	0.746	1.233	0.920	
2 680	41490	QPSK	B	Open	20	22.5	21.63	-0.05	Front	0	1	0	1:1.58	5	0.334	1.222	0.408	
2 680	41490	QPSK	B	Open	20	22.5	21.64	-0.13	Front	0	50	0	1:1.58	5	0.334	1.219	0.407	
2 680	41490	QPSK	B	Open	20	22.5	21.63	0.04	Left	0	1	0	1:1.58	5	0.191	1.222	0.233	
2 680	41490	QPSK	B	Open	20	22.5	21.64	-0.15	Left	0	50	0	1:1.58	5	0.189	1.219	0.230	
2 680	41490	QPSK	B	Open	20	22.5	21.63	-0.02	Bottom	0	1	0	1:1.58	5	0.649	1.222	0.793	
2 506	39750	QPSK	B	Open	20	22.5	21.32	0.01	Bottom	0	1	0	1:1.58	5	0.590	1.312	0.774	
2 549.6	40185	QPSK	B	Open	20	22.5	21.47	0.01	Bottom	0	1	0	1:1.58	5	0.628	1.268	0.796	
2 593	40620	QPSK	B	Open	20	22.5	21.38	0.02	Bottom	0	1	0	1:1.58	5	0.603	1.294	0.780	
2 636.5	41055	QPSK	B	Open	20	22.5	21.35	0.12	Bottom	0	1	99	1:1.58	5	0.655	1.303	0.853	
2 680	41490	QPSK	B	Open	20	22.5	21.64	-0.02	Bottom	0	50	0	1:1.58	5	0.676	1.219	0.824	
2 506	39750	QPSK	B	Open	20	22.5	21.33	0.02	Bottom	0	50	49	1:1.58	5	0.601	1.309	0.787	
2 549.6	40185	QPSK	B	Open	20	22.5	21.44	-0.02	Bottom	0	50	0	1:1.58	5	0.600	1.276	0.766	
2 593	40620	QPSK	B	Open	20	22.5	21.25	0.01	Bottom	0	50	0	1:1.58	5	0.597	1.334	0.796	
2 636.5	41055	QPSK	B	Open	20	22.5	21.34	0.07	Bottom	0	50	49	1:1.58	5	0.675	1.306	0.882	
2 680	41490	QPSK	B	Open	20	22.5	21.59	0.00	Bottom	0	100	0	1:1.58	5	0.673	1.233	0.830	
Intra-Band Uplink Carrier Aggregation (41C)																		
PCC	2 680	41490	QPSK	B	Open	20	22.5	21.78	0.06	Rear	0	1	0	1:1.58	5	0.663	1.180	0.782
SCC	2660.2	41292	QPSK	B	Open	20					0	1	99					
2 680	41490	QPSK	B	Close	20	22.5	21.63	0.00	Rear	0	1	0	1:1.58	5	0.560	1.222	0.684	-
2 506	39750	QPSK	B	Close	20	22.5	21.32	-0.15	Rear	0	1	0	1:1.58	5	0.542	1.312	0.711	-
2 549.6	40185	QPSK	B	Close	20	22.5	21.47	-0.17	Rear	0	1	0	1:1.58	5	0.563	1.268	0.714	-
2 593	40620	QPSK	B	Close	20	22.5	21.38	-0.10	Rear	0	1	0	1:1.58	5	0.493	1.294	0.638	-
2 636.5	41055	QPSK	B	Close	20	22.5	21.35	-0.07	Rear	0	1	99	1:1.58	5	0.543	1.303	0.708	-
2 680	41490	QPSK	B	Close	20	22.5	21.64	-0.08	Rear	0	50	0	1:1.58	5	0.551	1.219	0.672	
2 506	39750	QPSK	B	Close	20	22.5	21.33	0.00	Rear	0	50	49	1:1.58	5	0.549	1.309	0.719	
2 549.6	40185	QPSK	B	Close	20	22.5	21.44	-0.09	Rear	0	50	0	1:1.58	5	0.555	1.276	0.708	
2 593	40620	QPSK	B	Close	20	22.5	21.25	-0.03	Rear	0	50	0	1:1.58	5	0.483	1.334	0.644	
2 636.5	41055	QPSK	B	Close	20	22.5	21.34	0.11	Rear	0	50	49	1:1.58	5	0.546	1.306	0.713	
2 680	41490	QPSK	B	Close	20	22.5	21.59	-0.17	Rear	0	100	0	1:1.58	5	0.555	1.233	0.684	
2 680	41490	QPSK	B	Close	20	22.5	21.63	0.00	Front	0	1	0	1:1.58	5	0.046	1.222	0.056	
2 680	41490	QPSK	B	Close	20	22.5	21.64	0.00	Front	0	50	0	1:1.58	5	0.042	1.219	0.051	
2 680	41490	QPSK	B	Close	20	22.5	21.63	-0.02	Left	0	1	0	1:1.58	5	0.157	1.222	0.192	-
2 680	41490	QPSK	B	Close	20	22.5	21.64	0.11	Left	0	50	0	1:1.58	5	0.158	1.219	0.193	-
2 680	41490	QPSK	B	Close	20	22.5	21.63	0.03	Bottom	0	1	0	1:1.58	5	0.461	1.222	0.563	-
2 680	41490	QPSK	B	Close	20	22.5	21.64	0.08	Bottom	0	50	0	1:1.58	5	0.489	1.219	0.596	-
Intra-Band Uplink Carrier Aggregation (41C)																		
PCC	2 549.6	40185	QPSK	B	Close	20	22.5	21.35	0.17	Rear	0	1	0	1:1.58	5	0.342	1.303	0.446
SCC	2 529.7	39987	QPSK	B	Close	20					0	1	99					

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LTE TDD Band 41 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.	
MHz	Ch.				(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)	(W/kg)			
2 680	41490	QPSK	I	Open	20	20.5	19.79	-0.05	Rear	0	1	0	1:1.58	5	0.355	1.178	0.418	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	0.12	Rear	0	50	0	1:1.58	5	0.342	1.178	0.403	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	0.13	Front	0	1	0	1:1.58	5	0.279	1.178	0.329	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	-0.08	Front	0	50	0	1:1.58	5	0.265	1.178	0.312	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	-0.10	Right	0	1	0	1:1.58	5	0.648	1.178	0.763	-	
2 506	39750	QPSK	I	Open	20	20.5	19.39	-0.01	Right	0	1	0	1:1.58	5	0.644	1.291	0.831	-	
2 549.5	40185	QPSK	I	Open	20	20.5	19.70	-0.02	Right	0	1	0	1:1.58	5	0.670	1.202	0.805	-	
2 593	40620	QPSK	I	Open	20	20.5	19.77	0.04	Right	0	1	0	1:1.58	5	0.688	1.183	0.814	-	
2 636.5	41055	QPSK	I	Open	20	20.5	19.66	0.14	Right	0	1	0	1:1.58	5	0.716	1.213	0.869	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	0.04	Right	0	50	0	1:1.58	5	0.635	1.178	0.748	-	
2 506	39750	QPSK	I	Open	20	20.5	19.42	0.02	Right	0	50	0	1:1.58	5	0.696	1.282	0.892	-	
2 549.5	40185	QPSK	I	Open	20	20.5	19.67	0.01	Right	0	50	0	1:1.58	5	0.690	1.211	0.836	-	
2 593	40620	QPSK	I	Open	20	20.5	19.65	-0.03	Right	0	50	0	1:1.58	5	0.673	1.216	0.818	-	
2 636.5	41055	QPSK	I	Open	20	20.5	19.70	-0.17	Right	0	50	0	1:1.58	5	0.741	1.202	0.891	-	
2 680	41490	QPSK	I	Open	20	20.5	19.73	-0.02	Right	0	100	0	1:1.58	5	0.643	1.194	0.768	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	-0.08	Top	0	1	0	1:1.58	5	0.076	1.178	0.090	-	
2 680	41490	QPSK	I	Open	20	20.5	19.79	-0.01	Top	0	50	0	1:1.58	5	0.073	1.178	0.086	-	
Intra-Band Uplink Carrier Aggregation(41C)																			
PCC	2 636.5	41055	QPSK	I	Close	20	20.5	19.68	-0.11	Rear	0	50	0	1:1.58	5	0.381	1.208	0.460	
SCC	2 616.7	40857	QPSK	I	Close	20					0	50	49						
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.12	Rear	0	1	0	1:1.58	5	0.172	1.178	0.203	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.12	Rear	0	50	0	1:1.58	5	0.170	1.178	0.200	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	0.09	Front	0	1	0	1:1.58	5	0.245	1.178	0.289	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	0.19	Front	0	50	0	1:1.58	5	0.238	1.178	0.280	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	0.02	Right	0	1	0	1:1.58	5	0.766	1.178	0.902	-
	2 506	39750	QPSK	I	Close	20	20.5	19.39	0.04	Right	0	1	0	1:1.58	5	0.599	1.291	0.773	-
	2 549.5	40185	QPSK	I	Close	20	20.5	19.70	0.03	Right	0	1	0	1:1.58	5	0.676	1.202	0.813	-
	2 593	40620	QPSK	I	Close	20	20.5	19.77	0.03	Right	0	1	0	1:1.58	5	0.655	1.183	0.775	-
	2 636.5	41055	QPSK	I	Close	20	20.5	19.66	0.04	Right	0	1	0	1:1.58	5	0.755	1.213	0.916	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.05	Right	0	50	0	1:1.58	5	0.760	1.178	0.895	-
	2 506	39750	QPSK	I	Close	20	20.5	19.42	-0.01	Right	0	50	0	1:1.58	5	0.646	1.282	0.828	-
	2 549.5	40185	QPSK	I	Close	20	20.5	19.67	-0.02	Right	0	50	0	1:1.58	5	0.674	1.211	0.816	-
	2 593	40620	QPSK	I	Close	20	20.5	19.65	-0.01	Right	0	50	0	1:1.58	5	0.634	1.216	0.771	-
	2 636.5	41055	QPSK	I	Close	20	20.5	19.70	-0.04	Right	0	50	0	1:1.58	5	0.763	1.202	0.917	-
	2 680	41490	QPSK	I	Close	20	20.5	19.73	0.01	Right	0	100	0	1:1.58	5	0.742	1.194	0.886	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	0.07	Top	0	1	0	1:1.58	5	0.028	1.178	0.033	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.17	Top	0	50	0	1:1.58	5	0.028	1.178	0.033	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.07	Bottom	0	1	0	1:1.58	5	0.036	1.178	0.042	-
	2 680	41490	QPSK	I	Close	20	20.5	19.79	-0.14	Bottom	0	50	0	1:1.58	5	0.034	1.178	0.040	-
Intra-Band Uplink Carrier Aggregation(41C)																			
PCC	2 680	41490	QPSK	I	Close	20	20.5	19.27	0.07	Right	0	1	0	1:1.58	5	0.559	1.327	0.742	-
SCC	2 660.2	41292	QPSK	I	Close	20					0	1	99						
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(AWS) Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(MHz)	(dBm)	(dBm)	(dB)		(dB)	(mm)	(W/kg)	(W/kg)					
1 770	132572	QPSK	B	Open	20	20.5	19.60	-0.19	Rear	0	1	99	1:1	5	0.618	1.230	0.760	-
1 770	132572	QPSK	B	Open	20	20.5	19.59	-0.10	Rear	0	50	49	1:1	5	0.634	1.233	0.782	-
1 770	132572	QPSK	B	Open	20	20.5	19.60	0.17	Front	0	1	99	1:1	5	0.328	1.230	0.403	-
1 770	132572	QPSK	B	Open	20	20.5	19.59	0.18	Front	0	50	49	1:1	5	0.339	1.233	0.418	-
1 770	132572	QPSK	B	Open	20	20.5	19.60	0.18	Left	0	1	99	1:1	5	0.183	1.230	0.225	-
1 770	132572	QPSK	B	Open	20	20.5	19.59	-0.05	Left	0	50	49	1:1	5	0.190	1.233	0.234	-
1 770	132572	QPSK	B	Open	20	20.5	19.60	0.01	Bottom	0	1	99	1:1	5	0.741	1.230	0.911	-
1 720	132072	QPSK	B	Open	20	20.5	19.36	-0.06	Bottom	0	1	99	1:1	5	0.746	1.300	0.970	-
1 745	132322	QPSK	B	Open	20	20.5	19.50	0.01	Bottom	0	1	99	1:1	5	0.692	1.259	0.871	-
1 770	132572	QPSK	B	Open	20	20.5	19.59	0.00	Bottom	0	50	49	1:1	5	0.743	1.233	0.916	-
1 720	132072	QPSK	B	Open	20	20.5	19.46	0.03	Bottom	0	50	49	1:1	5	0.730	1.271	0.928	-
1 745	132322	QPSK	B	Open	20	20.5	19.57	0.00	Bottom	0	50	25	1:1	5	0.685	1.239	0.849	-
1 770	132572	QPSK	B	Open	20	20.5	19.65	0.01	Bottom	0	100	0	1:1	5	0.691	1.216	0.840	-
1 770	132572	QPSK	B	Close	20	20.5	19.60	-0.02	Rear	0	1	99	1:1	5	0.563	1.230	0.692	-
1 770	132572	QPSK	B	Close	20	20.5	19.59	0.02	Rear	0	50	49	1:1	5	0.579	1.233	0.714	-
1 770	132572	QPSK	B	Close	20	20.5	19.60	-0.17	Front	0	1	99	1:1	5	0.116	1.230	0.143	-
1 770	132572	QPSK	B	Close	20	20.5	19.59	-0.14	Front	0	50	49	1:1	5	0.123	1.233	0.152	-
1 770	132572	QPSK	B	Close	20	20.5	19.60	-0.19	Left	0	1	99	1:1	5	0.108	1.230	0.133	-
1 770	132572	QPSK	B	Close	20	20.5	19.59	-0.17	Left	0	50	49	1:1	5	0.113	1.233	0.139	-
1 770	132572	QPSK	B	Close	20	20.5	19.60	0.00	Bottom	0	1	99	1:1	5	0.760	1.230	0.935	-
1 720	132072	QPSK	B	Close	20	20.5	19.36	0.00	Bottom	0	1	99	1:1	5	0.772	1.300	1.004	-
1 745	132322	QPSK	B	Close	20	20.5	19.50	0.02	Bottom	0	1	99	1:1	5	0.760	1.259	0.957	-
1 770	132572	QPSK	B	Close	20	20.5	19.59	0.00	Bottom	0	50	49	1:1	5	0.790	1.233	0.974	-
1 720	132072	QPSK	B	Close	20	20.5	19.46	-0.01	Bottom	0	50	49	1:1	5	0.785	1.271	0.998	-
1 745	132322	QPSK	B	Close	20	20.5	19.57	-0.01	Bottom	0	50	25	1:1	5	0.751	1.239	0.930	-
1 770	132572	QPSK	B	Close	20	20.5	19.65	-0.01	Bottom	0	100	0	1:1	5	0.823	1.216	1.001	B9
1 770	132572	QPSK	B	Close	20	20.5	19.65	-0.10	Bottom	0	100	0	1:1	5	0.823	1.216	1.001	#
1 720	132072	QPSK	I	Open	20	20.5	20.37	-0.17	Rear	0	1	49	1:1	5	0.202	1.030	0.208	-
1 720	132072	QPSK	I	Open	20	20.5	20.35	-0.13	Rear	0	50	0	1:1	5	0.205	1.035	0.212	-
1 720	132072	QPSK	I	Open	20	20.5	20.37	-0.18	Front	0	1	49	1:1	5	0.279	1.030	0.287	-
1 720	132072	QPSK	I	Open	20	20.5	20.35	-0.16	Front	0	50	0	1:1	5	0.281	1.035	0.291	-
1 720	132072	QPSK	I	Open	20	20.5	20.37	0.13	Right	0	1	49	1:1	5	0.372	1.030	0.383	-
1 720	132072	QPSK	I	Open	20	20.5	20.35	0.17	Right	0	50	0	1:1	5	0.374	1.035	0.387	-
1 720	132072	QPSK	I	Open	20	20.5	20.37	-0.11	Top	0	1	49	1:1	5	0.033	1.030	0.034	-
1 720	132072	QPSK	I	Open	20	20.5	20.35	0.10	Top	0	50	0	1:1	5	0.033	1.035	0.034	-
1 745	132322	QPSK	I	Close	20	20.5	20.37	-0.10	Rear	0	1	49	1:1	5	0.016	1.030	0.016	-
1 770	132572	QPSK	I	Close	20	20.5	20.35	N/A	Rear	0	50	0	1:1	5	0.014	1.035	0.014	-
1 745	132322	QPSK	I	Close	20	20.5	20.37	-0.19	Front	0	1	49	1:1	5	0.091	1.030	0.094	-
1 770	132572	QPSK	I	Close	20	20.5	20.35	-0.13	Front	0	50	0	1:1	5	0.090	1.035	0.093	-
1 745	132322	QPSK	I	Close	20	20.5	20.37	-0.04	Right	0	1	49	1:1	5	0.318	1.030	0.328	-
1 770	132572	QPSK	I	Close	20	20.5	20.35	-0.04	Right	0	50	0	1:1	5	0.322	1.035	0.333	-
1 745	132322	QPSK	I	Close	20	20.5	20.37	0.00	Top	0	1	49	1:1	5	0.000	1.030	0.000	-
1 770	132572	QPSK	I	Close	20	20.5	20.35	0.00	Top	0	50	0	1:1	5	0.000	1.035	0.000	-
1 745	132322	QPSK	I	Close	20	20.5	20.37	-0.15	Bottom	0	1	49	1:1	5	0.026	1.030	0.027	-
1 770	132572	QPSK	I	Close	20	20.5	20.35	0.13	Bottom	0	50	0	1:1	5	0.027	1.035	0.028	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: # Data entry indicate Variability measurement.

NR FDD Band n5 Bodyworn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
Mhz	Ch.				(MHz)	(dBm)	(dBm)	(dB)		(dB)				(mm)	(W/kg)		(W/kg)	
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.49	-0.13	Rear	0	1	53	1:1	5	0.576	1.002	0.577	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.45	0.17	Rear	0	50	56	1:1	5	0.723	1.012	0.732	B10
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.49	0.11	Front	0	1	53	1:1	5	0.497	1.002	0.498	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.45	-0.16	Front	0	50	56	1:1	5	0.535	1.012	0.541	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.49	-0.10	Right	0	1	53	1:1	5	0.425	1.002	0.426	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.45	-0.03	Right	0	50	56	1:1	5	0.327	1.012	0.331	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.49	-0.17	Bottom	0	1	53	1:1	5	0.618	1.002	0.619	-
836.5	167300	DFT-s QPSK	A	Open	20	23.5	23.45	0.18	Bottom	0	50	56	1:1	5	0.569	1.012	0.576	-
836.5	167300	CP QPSK	A	Open	20	23.5	21.80	0.17	Rear	0	1	1	1:1	5	0.612	1.479	0.905	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.49	0.00	Rear	0	1	53	1:1	5	0.501	1.002	0.502	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.45	-0.07	Rear	0	50	56	1:1	5	0.518	1.012	0.524	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.49	-0.11	Front	0	1	53	1:1	5	0.037	1.002	0.037	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.45	-0.12	Front	0	50	56	1:1	5	0.050	1.012	0.051	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.49	0.16	Left	0	1	53	1:1	5	0.015	1.002	0.424	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.45	0.18	Left	0	50	56	1:1	5	0.016	1.012	0.418	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.49	0.17	Bottom	0	1	53	1:1	5	0.402	1.002	0.403	-
836.5	167300	DFT-s QPSK	A	Close	20	23.5	23.45	0.10	Bottom	0	50	56	1:1	5	0.417	1.012	0.422	-
836.5	167300	CP QPSK	A	Close	20	23.5	21.80	-0.15	Rear	0	1	1	1:1	5	0.632	1.479	0.935	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.91	0.12	Rear	0	1	1	1:1	5	0.314	1.285	0.403	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.89	-0.06	Rear	0	50	0	1:1	5	0.381	1.291	0.492	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.91	0.02	Front	0	1	1	1:1	5	0.330	1.285	0.424	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.89	-0.19	Front	0	50	0	1:1	5	0.363	1.291	0.469	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.91	-0.10	Left	0	1	1	1:1	5	0.388	1.285	0.499	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.89	-0.15	Left	0	50	0	1:1	5	0.432	1.291	0.558	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.91	-0.17	Top	0	1	1	1:1	5	0.022	1.285	0.028	-
836.5	167300	DFT-s QPSK	E	Open	20	21.0	19.89	0.09	Top	0	50	0	1:1	5	0.025	1.291	0.032	-
836.5	167300	CP QPSK	E	Open	20	21.0	19.88	-0.15	Left	0	1	1	1:1	5	0.399	1.294	0.516	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.91	-0.03	Rear	0	1	1	1:1	5	0.169	1.285	0.217	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.89	-0.03	Rear	0	50	0	1:1	5	0.168	1.291	0.217	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.91	-0.15	Front	0	1	1	1:1	5	0.191	1.285	0.245	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.89	-0.02	Front	0	50	0	1:1	5	0.194	1.291	0.250	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.91	0.16	Left	0	1	1	1:1	5	0.194	1.285	0.249	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.89	0.15	Left	0	50	0	1:1	5	0.188	1.291	0.243	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.91	0.02	Top	0	1	1	1:1	5	0.004	1.285	0.005	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.89	-0.14	Top	0	50	0	1:1	5	0.005	1.291	0.006	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.91	-0.10	Bottom	0	1	1	1:1	5	0.016	1.285	0.021	-
836.5	167300	DFT-s QPSK	E	Close	20	21.0	19.89	-0.01	Bottom	0	1	1	1:1	5	0.015	1.291	0.019	-
836.5	167300	CP QPSK	E	Close	20	21.0	19.88	-0.04	Front	0	50	0	1:1	5	0.276	1.294	0.357	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: # Data entry indicate Variability measurement.

NR TDD Band n41 Body worn/Hotspot SAR																		
Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.				(MHz)	(dBm)	(dBm)	(dB)										
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.47	0.14	Rear	0	1	1	1:1	5	0.653	1.007	0.658	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.41	0.11	Rear	0	135	69	1:1	5	0.704	1.021	0.719	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.48	0.17	Rear	0	270	0	1:1	5	0.729	1.005	0.733	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.47	0.00	Front	0	1	1	1:1	5	0.364	1.007	0.367	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.41	0.17	Front	0	135	69	1:1	5	0.403	1.021	0.411	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.47	0.12	Left	0	1	1	1:1	5	0.157	1.007	0.158	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.41	0.16	Left	0	135	69	1:1	5	0.201	1.021	0.205	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.47	0.15	Bottom	0	1	1	1:1	5	0.588	1.007	0.592	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.41	0.18	Bottom	0	135	69	1:1	5	0.601	1.021	0.614	-
2 592.99	518598	DFT-s QPSK	B	Open	100	20.5	20.48	0.15	Bottom	0	270	0	1:1	5	0.709	1.005	0.713	-
2 592.99	518598	CP QPSK	B	Open	100	20.5	20.24	0.17	Rear	0	1	1	1:1	5	0.727	1.067	0.772	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.47	0.05	Rear	0	1	1	1:1	5	0.748	1.007	0.753	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.41	0.18	Rear	0	135	69	1:1	5	0.595	1.021	0.607	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.48	0.11	Rear	0	270	0	1:1	5	0.496	1.005	0.498	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.47	0.17	Front	0	1	1	1:1	5	0.061	1.007	0.061	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.41	0.16	Front	0	135	69	1:1	5	0.055	1.021	0.056	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.47	0.00	Left	0	1	1	1:1	5	0.137	1.007	0.138	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.41	-0.01	Left	0	135	69	1:1	5	0.206	1.021	0.210	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.47	0.17	Bottom	0	1	1	1:1	5	0.532	1.007	0.536	-
2 592.99	518598	DFT-s QPSK	B	Close	100	20.5	20.41	0.16	Bottom	0	135	69	1:1	5	0.490	1.021	0.500	-
2 592.99	518598	CP QPSK	B	Close	100	20.5	20.24	0.15	Rear	0	1	1	1:1	5	0.654	1.062	0.695	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.49	0.04	Rear	0	1	1	1:1	5	0.451	1.002	0.452	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.48	-0.09	Rear	0	135	69	1:1	5	0.489	1.005	0.491	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.49	0.18	Front	0	270	0	1:1	5	0.496	1.002	0.497	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.48	0.12	Front	0	1	1	1:1	5	0.447	1.005	0.449	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.49	0.11	Right	0	135	69	1:1	5	0.842	1.002	0.844	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.48	0.11	Right	0	270	0	1:1	5	0.752	1.005	0.756	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.40	0.11	Right	0	1	1	1:1	5	0.826	1.023	0.845	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.49	0.13	Top	0	135	69	1:1	5	0.124	1.002	0.124	-
2 592.99	518598	DFT-s QPSK	I	Open	100	18.5	18.48	0.11	Top	0	270	0	1:1	5	0.132	1.005	0.133	-
2 592.99	518598	CP QPSK	I	Open	100	18.5	18.42	0.11	Right	0	1	1	1:1	5	0.969	1.019	0.987	B11
2 592.99	518598	CP QPSK	I	Open	100	18.5	18.42	0.10	Right	0	1	1	1:1	5	0.969	1.019	0.987	#
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	-0.10	Rear	0	1	1	1:1	5	0.202	1.002	0.202	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.48	0.15	Rear	0	135	69	1:1	5	0.202	1.005	0.203	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	0.18	Front	0	1	1	1:1	5	0.419	1.002	0.420	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.48	0.12	Front	0	135	69	1:1	5	0.309	1.005	0.311	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	0.11	Right	0	1	1	1:1	5	0.953	1.002	0.955	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.48	0.11	Right	0	135	69	1:1	5	0.737	1.005	0.741	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.40	0.11	Right	0	270	0	1:1	5	0.747	1.023	0.764	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	0.15	Top	0	1	1	1:1	5	0.038	1.002	0.038	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.48	0.15	Top	0	135	69	1:1	5	0.038	1.005	0.038	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	0.18	Bottom	0	1	1	1:1	5	0.136	1.002	0.136	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.48	0.19	Bottom	0	135	69	1:1	5	0.108	1.005	0.109	-
2 592.99	518598	CP QPSK	I	Close	100	18.5	18.42	0.18	Right	0	1	1	1:1	5	0.805	1.019	0.820	-
2 592.99	518598	DFT-s QPSK	I	Close	100	18.5	18.49	0.11	Right	0	1	1	1:1	5	0.805	1.002	0.807	#
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: # Data entry indicate Variability measurement.

NR FDD Band n66 Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.				(MHz)	(dBm)	(dBm)	(dB)										
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.73	-0.16	Rear	0	1	214	1:1	5	0.791	1.194	0.944	B12
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.68	0.12	Rear	0	108	108	1:1	5	0.643	1.208	0.777	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.60	0.16	Rear	0	216	0	1:1	5	0.678	1.230	0.834	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.73	-0.18	Front	0	1	214	1:1	5	0.277	1.194	0.331	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.68	0.16	Front	0	108	108	1:1	5	0.236	1.208	0.285	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.73	0.12	Left	0	1	214	1:1	5	0.190	1.194	0.227	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.68	0.17	Left	0	108	108	1:1	5	0.155	1.208	0.187	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.73	0.07	Bottom	0	1	214	1:1	5	0.676	1.194	0.807	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.68	0.05	Bottom	0	108	108	1:1	5	0.606	1.208	0.732	-
1745	349000	DFT-s QPSK	B	Open	40	20.5	19.60	0.03	Bottom	0	216	0	1:1	5	0.597	1.230	0.734	-
1745	349000	CP QPSK	B	Open	40	20.5	19.36	-0.02	Rear	0	1	1	1:1	5	0.373	1.300	0.485	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.73	-0.17	Rear	0	1	214	1:1	5	0.453	1.194	0.541	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.68	-0.14	Rear	0	108	108	1:1	5	0.488	1.208	0.590	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.73	-0.10	Front	0	1	214	1:1	5	0.115	1.194	0.137	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.68	0.16	Front	0	108	108	1:1	5	0.104	1.208	0.126	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.73	-0.15	Left	0	1	214	1:1	5	0.117	1.194	0.140	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.68	0.13	Left	0	108	108	1:1	5	0.116	1.208	0.140	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.73	-0.18	Bottom	0	1	214	1:1	5	0.687	1.194	0.820	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.68	0.18	Bottom	0	108	108	1:1	5	0.710	1.208	0.858	-
1745	349000	DFT-s QPSK	B	Close	40	20.5	19.60	0.18	Bottom	0	216	0	1:1	5	0.701	1.230	0.862	-
1745	349000	CP QPSK	B	Close	40	20.5	19.36	0.14	Bottom	0	1	1	1:1	5	0.590	1.300	0.767	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.21	-0.13	Rear	0	1	1	1:1	5	0.267	1.069	0.285	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.02	0.11	Rear	0	108	0	1:1	5	0.255	1.117	0.285	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.21	0.18	Front	0	1	1	1:1	5	0.261	1.069	0.279	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.02	0.00	Front	0	108	0	1:1	5	0.245	1.117	0.274	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.21	0.12	Right	0	1	1	1:1	5	0.554	1.069	0.592	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.02	-0.06	Right	0	108	0	1:1	5	0.521	1.117	0.582	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.21	0.12	Top	0	1	1	1:1	5	0.040	1.069	0.043	-
1745	349000	DFT-s QPSK	I	Open	40	20.5	20.02	0.18	Top	0	108	0	1:1	5	0.039	1.117	0.044	-
1745	349000	CP QPSK	I	Open	40	20.5	20.31	0.06	Right	0	1	1	1:1	5	0.474	1.045	0.495	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.21	0.00	Rear	0	1	1	1:1	5	0.015	1.069	0.016	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.02	0.00	Rear	0	108	0	1:1	5	0.014	1.117	0.016	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.21	0.17	Front	0	1	1	1:1	5	0.097	1.069	0.104	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.02	-0.11	Front	0	108	0	1:1	5	0.090	1.117	0.101	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.21	-0.05	Right	0	1	1	1:1	5	0.263	1.069	0.281	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.02	-0.04	Right	0	108	0	1:1	5	0.243	1.117	0.271	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.21	0.00	Top	0	1	1	1:1	5	0.000	1.069	0.000	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.02	0.00	Top	0	108	0	1:1	5	0.000	1.117	0.000	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.21	-0.13	Bottom	0	1	1	1:1	5	0.016	1.069	0.017	-
1745	349000	DFT-s QPSK	I	Close	40	20.5	20.02	0.11	Bottom	0	108	0	1:1	5	0.016	1.117	0.018	-
1745	349000	CP QPSK	I	Close	40	20.5	20.31	-0.05	Right	0	1	1	1:1	5	0.242	1.045	0.253	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram								

DTS Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
2 437	6	802.11b	G	Open	20	1	15.5	15.44	0.12	Rear	98.8	5	0.255	1.014	1.012	0.262	-
2 437	6	802.11b	G	Open	20	1	15.5	15.44	0.14	Front	98.8	5	0.223	1.014	1.012	0.229	-
2 437	6	802.11b	G	Open	20	1	15.5	15.44	0.18	Left	98.8	5	0.038	1.014	1.012	0.039	-
2 437	6	802.11b	G	Open	20	1	15.5	15.44	0.18	Top	98.8	5	0.460	1.014	1.012	0.472	B13
2 437	6	802.11b	G	Close	20	1	15.5	15.44	0.13	Rear	98.8	5	0.058	1.014	1.012	0.060	-
2 437	6	802.11b	G	Close	20	1	15.5	15.44	0.03	Front	98.8	5	0.133	1.014	1.012	0.137	-
2 437	6	802.11b	G	Close	20	1	15.5	15.44	0.19	Left	98.8	5	0.038	1.014	1.012	0.039	-
2 437	6	802.11b	G	Close	20	1	15.5	15.44	0.11	Bottom	98.8	5	0.327	1.014	1.012	0.336	-
2 437	6	802.11b	H	Open	20	1	15.5	13.72	0.15	Rear	98.8	5	0.033	1.507	1.012	0.050	-
2 437	6	802.11b	H	Open	20	1	15.5	13.72	0.14	Front	98.8	5	0.075	1.507	1.012	0.114	-
2 437	6	802.11b	H	Open	20	1	15.5	13.72	0.17	Right	98.8	5	0.007	1.507	1.012	0.011	-
2 437	6	802.11b	H	Open	20	1	15.5	13.72	0.12	Top	98.8	5	0.044	1.507	1.012	0.067	-
2 437	6	802.11b	H	Close	20	1	15.5	13.72	0.19	Rear	98.8	5	0.023	1.507	1.012	0.035	-
2 437	6	802.11b	H	Close	20	1	15.5	13.72	0.00	Front	98.8	5	0.029	1.507	1.012	0.044	-
2 437	6	802.11b	H	Close	20	1	15.5	13.72	0.09	Right	98.8	5	0.009	1.507	1.012	0.014	-
2 437	6	802.11b	H	Close	20	1	15.5	13.72	0.14	Bottom	98.8	5	0.044	1.507	1.012	0.067	-
2 437	6	802.11b	G+H	Open	20	1	15.5	13.72	0.13	Rear	98.8	5	0.213	1.507	1.012	0.325	-
2 437	6	802.11b	G+H	Open	20	1	15.5	13.72	0.00	Front	98.8	5	0.210	1.507	1.012	0.320	-
2 437	6	802.11b	G+H	Open	20	1	15.5	13.72	0.02	Left	98.8	5	0.037	1.507	1.012	0.056	-
2 437	6	802.11b	G+H	Open	20	1	15.5	13.72	0.05	Right	98.8	5	0.024	1.507	1.012	0.037	-
2 437	6	802.11b	G+H	Open	20	1	15.5	13.72	0.14	Top	98.8	5	0.311	1.507	1.012	0.474	-
2 437	6	802.11b	G+H	Close	20	1	15.5	13.72	0.19	Rear	98.8	5	0.068	1.507	1.012	0.104	-
2 437	6	802.11b	G+H	Close	20	1	15.5	13.72	0.19	Front	98.8	5	0.232	1.507	1.012	0.354	-
2 437	6	802.11b	G+H	Close	20	1	15.5	13.72	0.17	Left	98.8	5	0.041	1.507	1.012	0.063	-
2 437	6	802.11b	G+H	Close	20	1	15.5	13.72	0.17	Right	98.8	5	0.032	1.507	1.012	0.049	-
2 437	6	802.11b	G+H	Close	20	1	15.5	13.72	0.18	Bottom	98.8	5	0.339	1.507	1.012	0.517	-
ANSI/ IEEE C95.1 - 2005- Safety Limit										Body							
Spatial Peak										1.6 W/kg							
Uncontrolled Exposure/ General Population										Averaged over 1 gram							

5 GHz WLAN Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
5 290	58	802.11ac	F	Open	80	MCS0	16.0	15.95	0.16	Rear	85.9	5	0.466	1.011	1.164	0.548	-
5 290	58	802.11ac	F	Open	80	MCS0	16.0	15.95	0.18	Front	85.9	5	0.230	1.011	1.164	0.271	-
5 290	58	802.11ac	F	Open	80	MCS0	16.0	15.95	0.13	Left	85.9	5	0.562	1.011	1.164	0.661	B14
5 290	58	802.11ac	F	Open	80	MCS0	16.0	15.95	0.18	Top	85.9	5	0.163	1.011	1.164	0.192	-
5 290	58	802.11ac	F	Close	80	MCS0	16.0	15.95	-0.14	Rear	85.9	5	0.028	1.011	1.164	0.033	-
5 290	58	802.11ac	F	Close	80	MCS0	16.0	15.95	-0.13	Front	85.9	5	0.356	1.011	1.164	0.419	-
5 290	58	802.11ac	F	Close	80	MCS0	16.0	15.95	0.11	Left	85.9	5	0.536	1.011	1.164	0.631	-
5 290	58	802.11ac	F	Close	80	MCS0	16.0	15.95	0.19	Top	85.9	5	0.151	1.011	1.164	0.178	-
5 530	106	802.11ac	F	Open	80	MCS0	16.0	15.40	0.00	Rear	85.9	5	0.207	1.148	1.164	0.277	-
5 530	106	802.11ac	F	Open	80	MCS0	16.0	15.40	-0.14	Front	85.9	5	0.146	1.148	1.164	0.195	-
5 530	106	802.11ac	F	Open	80	MCS0	16.0	15.40	0.12	Left	85.9	5	0.441	1.148	1.164	0.589	-
5 530	106	802.11ac	F	Open	80	MCS0	16.0	15.40	0.19	Top	85.9	5	0.120	1.148	1.164	0.160	-
5 530	106	802.11ac	F	Close	80	MCS0	16.0	15.40	0.00	Rear	85.9	5	0.013	1.148	1.164	0.017	-
5 530	106	802.11ac	F	Close	80	MCS0	16.0	15.40	-0.12	Front	85.9	5	0.258	1.148	1.164	0.345	-
5 530	106	802.11ac	F	Close	80	MCS0	16.0	15.40	0.00	Left	85.9	5	0.249	1.148	1.164	0.333	-
5 530	106	802.11ac	F	Close	80	MCS0	16.0	15.40	0.12	Top	85.9	5	0.129	1.148	1.164	0.172	-
5 775	155	802.11ac	F	Open	80	MCS0	16.0	15.71	-0.10	Rear	85.9	5	0.162	1.069	1.164	0.202	-
5 775	155	802.11ac	F	Open	80	MCS0	16.0	15.71	-0.16	Front	85.9	5	0.075	1.069	1.164	0.093	-
5 775	155	802.11ac	F	Open	80	MCS0	16.0	15.71	0.13	Left	85.9	5	0.248	1.069	1.164	0.309	-
5 775	155	802.11ac	F	Open	80	MCS0	16.0	15.71	0.00	Top	85.9	5	0.052	1.069	1.164	0.065	-
5 775	155	802.11ac	F	Close	80	MCS0	16.0	15.71	0.00	Rear	85.9	5	0.009	1.069	1.164	0.012	-
5 775	155	802.11ac	F	Close	80	MCS0	16.0	15.71	-0.19	Front	85.9	5	0.147	1.069	1.164	0.183	-
5 775	155	802.11ac	F	Close	80	MCS0	16.0	15.71	0.00	Left	85.9	5	0.208	1.069	1.164	0.259	-
5 775	155	802.11ac	F	Close	80	MCS0	16.0	15.71	0.00	Top	85.9	5	0.080	1.069	1.164	0.100	-
5 855	171	802.11ac	F	Open	80	MCS0	16.0	15.82	0.00	Rear	85.9	5	0.121	1.042	1.164	0.147	-
5 855	171	802.11ac	F	Open	80	MCS0	16.0	15.82	0.00	Front	85.9	5	0.108	1.042	1.164	0.131	-
5 855	171	802.11ac	F	Open	80	MCS0	16.0	15.82	0.00	Left	85.9	5	0.196	1.042	1.164	0.238	-
5 855	171	802.11ac	F	Open	80	MCS0	16.0	15.82	0.00	Bottom	85.9	5	0.081	1.042	1.164	0.098	-
5 855	171	802.11ac	F	Close	80	MCS0	16.0	15.82	0.00	Rear	85.9	5	0.000	1.042	1.164	0.000	-
5 855	171	802.11ac	F	Close	80	MCS0	16.0	15.82	0.00	Front	85.9	5	0.094	1.042	1.164	0.114	-
5 855	171	802.11ac	F	Close	80	MCS0	16.0	15.82	0.00	Left	85.9	5	0.206	1.042	1.164	0.250	-
5 855	171	802.11ac	F	Close	80	MCS0	16.0	15.82	0.00	Bottom	85.9	5	0.060	1.042	1.164	0.073	-

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5 GHz WLAN Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
5 290	58	802.11ac	H	Open	80	MCS0	16.0	15.34	0.00	Rear	85.9	5	0.126	1.164	1.164	0.171	-
5 290	58	802.11ac	H	Open	80	MCS0	16.0	15.34	0.00	Front	85.9	5	0.115	1.164	1.164	0.156	-
5 290	58	802.11ac	H	Open	80	MCS0	16.0	15.34	0.00	Right	85.9	5	0.007	1.164	1.164	0.009	-
5 290	58	802.11ac	H	Open	80	MCS0	16.0	15.34	-0.19	Top	85.9	5	0.031	1.164	1.164	0.042	-
5 290	58	802.11ac	H	Close	80	MCS0	16.0	15.34	0.19	Rear	85.9	5	0.021	1.164	1.164	0.028	-
5 290	58	802.11ac	H	Close	80	MCS0	16.0	15.34	-0.02	Front	85.9	5	0.068	1.164	1.164	0.092	-
5 290	58	802.11ac	H	Close	80	MCS0	16.0	15.34	0.08	Right	85.9	5	0.021	1.164	1.164	0.028	-
5 290	58	802.11ac	H	Close	80	MCS0	16.0	15.34	0.10	Bottom	85.9	5	0.016	1.164	1.164	0.022	-
5 690	138	802.11ac	H	Open	80	MCS0	16.0	15.72	-0.17	Rear	85.9	5	0.085	1.067	1.164	0.106	-
5 690	138	802.11ac	H	Open	80	MCS0	16.0	15.72	0.00	Front	85.9	5	0.103	1.067	1.164	0.128	-
5 690	138	802.11ac	H	Open	80	MCS0	16.0	15.72	0.00	Right	85.9	5	0.018	1.067	1.164	0.022	-
5 690	138	802.11ac	H	Open	80	MCS0	16.0	15.72	0.09	Top	85.9	5	0.059	1.067	1.164	0.073	-
5 690	138	802.11ac	H	Close	80	MCS0	16.0	15.72	0.00	Rear	85.9	5	0.010	1.067	1.164	0.012	-
5 690	138	802.11ac	H	Close	80	MCS0	16.0	15.72	0.00	Front	85.9	5	0.027	1.067	1.164	0.034	-
5 690	138	802.11ac	H	Close	80	MCS0	16.0	15.72	0.00	Right	85.9	5	0.013	1.067	1.164	0.016	-
5 690	138	802.11ac	H	Close	80	MCS0	16.0	15.72	0.17	Bottom	85.9	5	0.062	1.067	1.164	0.077	-
5 775	155	802.11ac	H	Open	80	MCS0	16.0	15.90	0.00	Rear	85.9	5	0.101	1.191	1.164	0.140	-
5 775	155	802.11ac	H	Open	80	MCS0	16.0	15.90	0.00	Front	85.9	5	0.157	1.191	1.164	0.218	-
5 775	155	802.11ac	H	Open	80	MCS0	16.0	15.90	0.00	Right	85.9	5	0.035	1.191	1.164	0.049	-
5 775	155	802.11ac	H	Open	80	MCS0	16.0	15.90	0.19	Top	85.9	5	0.046	1.191	1.164	0.064	-
5 775	155	802.11ac	H	Close	80	MCS0	16.0	15.90	0.06	Rear	85.9	5	0.012	1.023	1.164	0.014	-
5 775	155	802.11ac	H	Close	80	MCS0	16.0	15.90	0.00	Front	85.9	5	0.050	1.023	1.164	0.060	-
5 775	155	802.11ac	H	Close	80	MCS0	16.0	15.90	0.00	Right	85.9	5	0.039	1.023	1.164	0.046	-
5 775	155	802.11ac	H	Close	80	MCS0	16.0	15.90	-0.19	Bottom	85.9	5	0.100	1.023	1.164	0.119	-
5 855	171	802.11ac	H	Open	80	MCS0	16.0	15.95	0.00	Rear	85.9	5	0.121	1.012	1.164	0.143	-
5 855	171	802.11ac	H	Open	80	MCS0	16.0	15.95	0.00	Front	85.9	5	0.159	1.012	1.164	0.187	-
5 855	171	802.11ac	H	Open	80	MCS0	16.0	15.95	0.00	Right	85.9	5	0.049	1.012	1.164	0.058	-
5 855	171	802.11ac	H	Open	80	MCS0	16.0	15.95	0.13	Top	85.9	5	0.071	1.012	1.164	0.084	-
5 855	171	802.11ac	H	Close	80	MCS0	16.0	15.95	-0.12	Rear	85.9	5	0.008	1.012	1.164	0.010	-
5 855	171	802.11ac	H	Close	80	MCS0	16.0	15.95	-0.10	Front	85.9	5	0.086	1.012	1.164	0.101	-
5 855	171	802.11ac	H	Close	80	MCS0	16.0	15.95	0.00	Right	85.9	5	0.067	1.012	1.164	0.079	-
5 855	171	802.11ac	H	Close	80	MCS0	16.0	15.95	0.12	Bottom	85.9	5	0.131	1.012	1.164	0.154	-

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5 GHz WLAN Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
5 290	58	802.11ac	F+H	Open	80	MCS0	16.0	15.34	0.00	Rear	85.9	5	0.374	1.164	1.164	0.507	-
5 290	58	802.11ac	F+H	Open	80	MCS0	16.0	15.34	-0.14	Front	85.9	5	0.237	1.164	1.164	0.321	-
5 290	58	802.11ac	F+H	Open	80	MCS0	16.0	15.34	0.11	Left	85.9	5	0.552	1.164	1.164	0.748	-
5 290	58	802.11ac	F+H	Open	80	MCS0	16.0	15.34	0.00	Right	85.9	5	0.001	1.164	1.164	0.001	-
5 290	58	802.11ac	F+H	Open	80	MCS0	16.0	15.34	0.12	Top	85.9	5	0.180	1.164	1.164	0.244	-
5 290	58	802.11ac	F+H	Close	80	MCS0	16.0	15.34	-0.18	Rear	85.9	5	0.044	1.164	1.164	0.060	-
5 290	58	802.11ac	F+H	Close	80	MCS0	16.0	15.34	-0.15	Front	85.9	5	0.384	1.164	1.164	0.520	-
5 290	58	802.11ac	F+H	Close	80	MCS0	16.0	15.34	0.03	Left	85.9	5	0.536	1.164	1.164	0.726	-
5 290	58	802.11ac	F+H	Close	80	MCS0	16.0	15.34	0.10	Right	85.9	5	0.033	1.164	1.164	0.045	-
5 290	58	802.11ac	F+H	Close	80	MCS0	16.0	15.34	0.13	Bottom	85.9	5	0.163	1.164	1.164	0.221	-
5 690	138	802.11ac	F+H	Open	80	MCS0	16.0	15.28	0.00	Rear	85.9	5	0.100	1.180	1.164	0.137	-
5 690	138	802.11ac	F+H	Open	80	MCS0	16.0	15.28	0.00	Front	85.9	5	0.123	1.180	1.164	0.169	-
5 690	138	802.11ac	F+H	Open	80	MCS0	16.0	15.28	0.13	Left	85.9	5	0.220	1.180	1.164	0.302	-
5 690	138	802.11ac	F+H	Open	80	MCS0	16.0	15.28	0.00	Right	85.9	5	0.015	1.180	1.164	0.021	-
5 690	138	802.11ac	F+H	Open	80	MCS0	16.0	15.28	0.17	Top	85.9	5	0.087	1.180	1.164	0.120	-
5 690	138	802.11ac	F+H	Close	80	MCS0	16.0	15.28	0.00	Rear	85.9	5	0.000	1.180	1.164	0.000	-
5 690	138	802.11ac	F+H	Close	80	MCS0	16.0	15.28	-0.14	Front	85.9	5	0.163	1.180	1.164	0.224	-
5 690	138	802.11ac	F+H	Close	80	MCS0	16.0	15.28	0.00	Left	85.9	5	0.362	1.180	1.164	0.497	-
5 690	138	802.11ac	F+H	Close	80	MCS0	16.0	15.28	0.00	Right	85.9	5	0.025	1.180	1.164	0.034	-
5 690	138	802.11ac	F+H	Close	80	MCS0	16.0	15.28	0.13	Bottom	85.9	5	0.154	1.180	1.164	0.212	-
5 775	155	802.11ac	F+H	Open	80	MCS0	16.0	15.71	0.00	Rear	85.9	5	0.127	1.069	1.164	0.158	-
5 775	155	802.11ac	F+H	Open	80	MCS0	16.0	15.71	0.00	Front	85.9	5	0.150	1.069	1.164	0.187	-
5 775	155	802.11ac	F+H	Open	80	MCS0	16.0	15.71	-0.04	Left	85.9	5	0.260	1.069	1.164	0.324	-
5 775	155	802.11ac	F+H	Open	80	MCS0	16.0	15.71	0.00	Right	85.9	5	0.049	1.069	1.164	0.061	-
5 775	155	802.11ac	F+H	Open	80	MCS0	16.0	15.71	-0.13	Top	85.9	5	0.143	1.069	1.164	0.178	-
5 775	155	802.11ac	F+H	Close	80	MCS0	16.0	15.71	0.00	Rear	85.9	5	0.012	1.069	1.164	0.015	-
5 775	155	802.11ac	F+H	Close	80	MCS0	16.0	15.71	-0.06	Front	85.9	5	0.150	1.069	1.164	0.187	-
5 775	155	802.11ac	F+H	Close	80	MCS0	16.0	15.71	0.00	Left	85.9	5	0.319	1.069	1.164	0.397	-
5 775	155	802.11ac	F+H	Close	80	MCS0	16.0	15.71	0.00	Right	85.9	5	0.049	1.069	1.164	0.061	-
5 775	155	802.11ac	F+H	Close	80	MCS0	16.0	15.71	0.17	Bottom	85.9	5	0.187	1.069	1.164	0.233	-
5 855	171	802.11ac	F+H	Open	80	MCS0	16.0	15.82	0.15	Rear	85.9	5	0.186	1.042	1.164	0.226	-
5 855	171	802.11ac	F+H	Open	80	MCS0	16.0	15.82	-0.10	Front	85.9	5	0.226	1.042	1.164	0.274	-
5 855	171	802.11ac	F+H	Open	80	MCS0	16.0	15.82	0.15	Left	85.9	5	0.275	1.042	1.164	0.334	-
5 855	171	802.11ac	F+H	Open	80	MCS0	16.0	15.82	0.00	Right	85.9	5	0.084	1.042	1.164	0.102	-
5 855	171	802.11ac	F+H	Open	80	MCS0	16.0	15.82	0.17	Top	85.9	5	0.165	1.042	1.164	0.200	-
5 855	171	802.11ac	F+H	Close	80	MCS0	16.0	15.82	-0.11	Rear	85.9	5	0.052	1.042	1.164	0.063	-
5 855	171	802.11ac	F+H	Close	80	MCS0	16.0	15.82	0.12	Front	85.9	5	0.212	1.042	1.164	0.257	-
5 855	171	802.11ac	F+H	Close	80	MCS0	16.0	15.82	0.12	Left	85.9	5	0.273	1.042	1.164	0.331	-
5 855	171	802.11ac	F+H	Close	80	MCS0	16.0	15.82	0.18	Right	85.9	5	0.069	1.042	1.164	0.084	-
5 855	171	802.11ac	F+H	Close	80	MCS0	16.0	15.82	0.15	Bottom	85.9	5	0.164	1.042	1.164	0.199	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram							

6 GHz WLAN Body worn/Hotspot SAR

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.19	Rear	99.6	5	0.000	1.074	1.004	0.000	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	-0.13	Front	99.6	5	0.009	1.074	1.004	0.010	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	-0.16	Left	99.6	5	0.052	1.074	1.004	0.056	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.17	Top	99.6	5	0.024	1.074	1.004	0.026	-
5 965	3	802.11ax	F	Open	40	MCS0	11.0	10.05	0.10	Left	99.6	5	0.054	1.245	1.004	0.068	-
6 165	43	802.11ax	F	Open	40	MCS0	11.0	10.66	0.15	Left	99.6	5	0.070	1.081	1.004	0.076	B15
6 845	179	802.11ax	F	Open	40	MCS0	11.0	10.23	0.10	Left	99.6	5	0.020	1.194	1.004	0.024	-
7 085	227	802.11ax	F	Open	40	MCS0	11.0	9.87	0.13	Left	99.6	5	0.019	1.297	1.004	0.025	-
6 525	115	802.11ax	F	Close	40	MCS0	11.0	10.69	0.10	Rear	99.6	5	0.000	1.074	1.004	0.000	-
6 525	115	802.11ax	F	Close	40	MCS0	11.0	10.69	0.15	Front	99.6	5	0.027	1.074	1.004	0.029	-
6 525	115	802.11ax	F	Close	40	MCS0	11.0	10.69	0.00	Left	99.6	5	0.031	1.074	1.004	0.033	-
6 525	115	802.11ax	F	Close	40	MCS0	11.0	10.69	0.18	Bottom	99.6	5	0.000	1.074	1.004	0.000	-
5 965	3	802.11ax	F	Close	40	MCS0	11.0	10.05	0.15	Left	99.6	5	0.035	1.245	1.004	0.044	-
6 165	43	802.11ax	F	Close	40	MCS0	11.0	10.66	0.18	Left	99.6	5	0.024	1.081	1.004	0.026	-
6 845	179	802.11ax	F	Close	40	MCS0	11.0	10.23	0.15	Left	99.6	5	0.000	1.194	1.004	0.000	-
7 085	227	802.11ax	F	Close	40	MCS0	11.0	9.87	0.15	Left	99.6	5	0.013	1.297	1.004	0.017	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	10.75	0.11	Rear	99.6	5	0.004	1.059	1.004	0.004	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	10.75	0.00	Front	99.6	5	0.029	1.059	1.004	0.031	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	10.75	0.00	Right	99.6	5	0.000	1.059	1.004	0.000	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	10.75	0.15	Top	99.6	5	0.005	1.059	1.004	0.005	-
5 965	3	802.11ax	H	Open	40	MCS0	11.0	10.11	0.00	Front	99.6	5	0.026	1.227	1.004	0.032	-
6 165	43	802.11ax	H	Open	40	MCS0	11.0	9.92	-0.16	Front	99.6	5	0.019	1.282	1.004	0.024	-
6 525	115	802.11ax	H	Open	40	MCS0	11.0	10.14	-0.11	Front	99.6	5	0.000	1.219	1.004	0.000	-
6 845	179	802.11ax	H	Open	40	MCS0	11.0	10.22	-0.12	Front	99.6	5	0.014	1.197	1.004	0.017	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.19	Rear	99.6	5	0.000	1.059	1.004	0.000	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.12	Front	99.6	5	0.000	1.059	1.004	0.000	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.14	Right	99.6	5	0.017	1.059	1.004	0.018	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.17	Bottom	99.6	5	0.000	1.059	1.004	0.000	-
5 965	3	802.11ax	H	Close	40	MCS0	11.0	10.11	0.18	Right	99.6	5	0.033	1.227	1.004	0.041	-
6 165	43	802.11ax	H	Close	40	MCS0	11.0	9.92	0.16	Right	99.6	5	0.045	1.282	1.004	0.058	-
6 525	115	802.11ax	H	Close	40	MCS0	11.0	10.14	0.13	Right	99.6	5	0.037	1.219	1.004	0.045	-
6 845	179	802.11ax	H	Close	40	MCS0	11.0	10.22	0.18	Right	99.6	5	0.039	1.197	1.004	0.047	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram							

DSS Tethering SAR

Frequency		Mode	Ant.	Form Factor	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Distance	Meas. SAR	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.				(dBm)	(dBm)	(dB)		(mm)	(W/kg)				
2 402	0	DH5	G	Open	19.5	18.62	0.10	Rear	5	0.104	1.225	1.013	0.129	-
2 402	0	DH5	G	Open	19.5	18.62	0.17	Front	5	0.074	1.225	1.013	0.092	-
2 402	0	DH5	G	Open	19.5	18.62	0.16	Left	5	0.016	1.225	1.013	0.020	-
2 402	0	DH5	G	Open	19.5	18.62	0.10	Top	5	0.298	1.225	1.013	0.370	-
2 402	0	DH5	G	Close	19.5	18.62	0.14	Rear	5	0.043	1.225	1.013	0.053	-
2 402	0	DH5	G	Close	19.5	18.62	0.16	Front	5	0.104	1.225	1.013	0.129	-
2 402	0	DH5	G	Close	19.5	18.62	0.04	Left	5	0.022	1.225	1.013	0.027	-
2 402	0	DH5	G	Close	19.5	18.62	0.10	Bottom	5	0.251	1.225	1.013	0.311	-
2 402	0	DH5	H	Open	19.5	19.03	0.18	Rear	5	0.103	1.114	1.013	0.116	-
2 402	0	DH5	H	Open	19.5	19.03	0.11	Front	5	0.290	1.114	1.013	0.327	-
2 402	0	DH5	H	Open	19.5	19.03	-0.14	Right	5	0.032	1.114	1.013	0.036	-
2 402	0	DH5	H	Open	19.5	19.03	0.10	Top	5	0.187	1.114	1.013	0.211	-
2 402	0	DH5	H	Close	19.5	19.03	-0.11	Rear	5	0.081	1.114	1.013	0.091	-
2 402	0	DH5	H	Close	19.5	19.03	-0.19	Front	5	0.111	1.114	1.013	0.125	-
2 402	0	DH5	H	Close	19.5	19.03	-0.14	Right	5	0.039	1.114	1.013	0.044	-
2 402	0	DH5	H	Close	19.5	19.03	0.17	Bottom	5	0.167	1.114	1.013	0.188	-
2 441	39	DH5	G+H	Open	15.0	14.32	0.11	Rear	5	0.190	1.169	1.013	0.225	-
2 441	39	DH5	G+H	Open	15.0	14.32	0.18	Front	5	0.202	1.169	1.013	0.239	-
2 441	39	DH5	G+H	Open	15.0	14.32	0.02	Left	5	0.017	1.169	1.013	0.020	-
2 441	39	DH5	G+H	Open	15.0	14.32	0.12	Right	5	0.028	1.169	1.013	0.033	-
2 441	39	DH5	G+H	Open	15.0	14.32	0.14	Top	5	0.541	1.169	1.013	0.641	B16
2 441	39	DH5	G+H	Close	15.0	14.32	0.17	Rear	5	0.066	1.169	1.013	0.078	-
2 441	39	DH5	G+H	Close	15.0	14.32	0.14	Front	5	0.263	1.169	1.013	0.311	-
2 441	39	DH5	G+H	Close	15.0	14.32	0.12	Left	5	0.027	1.169	1.013	0.032	-
2 441	39	DH5	G+H	Close	15.0	14.32	0.12	Right	5	0.019	1.169	1.013	0.022	-
2 441	39	DH5	G+H	Close	15.0	14.32	0.15	Bottom	5	0.485	1.169	1.013	0.574	-
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, so 10g Phablet SAR is not required per FCC KDB 941225 D07 UMPC Mini Tablet v01r02.

13.1.4 Phablet SAR Measurement Results

NFC Phablet SAR_10g									
Frequency MHz	Mode	Ant.	Form Factor	Data Rate (kbps)	Power Drift (dB)	Test Position	Distance (mm)	Meas. SAR (W/kg)	Plot No.
13.56	NFC(Type A)	106	Open	106	0.00	Rear	0	0.007 05	-
13.56	NFC(Type B)	106	Open	106	0.00	Rear	0	0.007 65	C1
13.56	NFC(Type F)	106	Open	106	0.00	Rear	0	0.000 000 659	-
13.56	NFC(Type B)	106	Open	106	0.00	Front	0	0.000 000 35	-
13.56	NFC(Type B)	106	Open	106	0.00	Left	0	0.000 001 350	-
13.56	NFC(Type B)	106	Open	106	0.00	Right	0	0.000 001 72	-
13.56	NFC(Type B)	106	Open	106	0.00	Top	0	0.000 000 371	-
13.56	NFC(Type B)	106	Open	106	0.00	Bottom	0	0.000 000 119	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population					Extremity SAR 4.0 W/kg Averaged over 10 gram				

13.2 Absorbed Power Density Results

13.2.1 Head Absorbed Power Density Results

6 GHz Head Absorbed Power Density – RCV-ON											
Frequency		Mode	Ant.	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Meas. APD 4 cm ²	Plot No.
MHz	Ch.									(mW/cm ²)	
6 525	115	802.11ax	F	40	MCS0	11.0	10.91	0.17	Left Touch	0.020 6	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.91	0.10	Left Tilt	0.028 8	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.91	-0.10	Right Touch	0.041 8	-
6 525	115	802.11ax	F	40	MCS0	11.0	10.91	-0.14	Right Tilt	0.032 5	-
5 965	3	802.11ax	F	40	MCS0	11.0	10.24	-0.16	Right Touch	N/A	-
6 165	43	802.11ax	F	40	MCS0	11.0	10.51	0.11	Right Touch	0.056 5	D1
6 845	179	802.11ax	F	40	MCS0	11.0	10.21	-0.14	Right Touch	0.032 6	-
7 085	227	802.11ax	F	40	MCS0	11.0	10.04	-0.12	Right Touch	0.031 9	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	-0.10	Left Touch	0.027	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	0.19	Left Tilt	0.021	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	-0.19	Right Touch	0.000	-
7 085	227	802.11ax	H	40	MCS0	11.0	10.75	0.14	Right Tilt	0.000	-
5 965	3	802.11ax	H	40	MCS0	11.0	10.11	-0.11	Left Touch	N/A	-
6 165	43	802.11ax	H	40	MCS0	11.0	9.92	-0.13	Left Touch	0.030	-
6 525	115	802.11ax	H	40	MCS0	11.0	10.14	0.15	Left Touch	0.036	-
6 845	179	802.11ax	H	40	MCS0	11.0	10.22	-0.17	Left Touch	0.037	-

13.2.2 Body/Hotspot Absorbed Power Density Results

6 GHz WLAN Body/Hotspot Absorbed Power Density													
Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance (mm)	Meas. APD 4 cm ²	Plot No.
MHz	Ch.											(mW/cm ²)	
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.19	Rear	5	0.000 3	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	-0.13	Front	5	0.002 2	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	-0.16	Left	5	0.028 9	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.17	Top	5	0.009 6	-
5 965	3	802.11ax	F	Open	40	MCS0	11.0	10.05	0.10	Left	5	N/A	-
6 165	43	802.11ax	F	Open	40	MCS0	11.0	10.66	0.15	Left	5	0.038 3	D2
6 845	179	802.11ax	F	Open	40	MCS0	11.0	10.23	0.10	Left	5	0.009 0	-
7 085	227	802.11ax	F	Open	40	MCS0	11.0	9.87	0.13	Left	5	0.006 2	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.10	Rear	5	N/A	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.15	Front	5	0.008 2	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.00	Left	5	0.016 9	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.18	Bottom	5	0.000 2	-
5 965	3	802.11ax	F	Open	40	MCS0	11.0	10.05	0.15	Left	5	N/A	-
6 165	43	802.11ax	F	Open	40	MCS0	11.0	10.66	0.18	Left	5	0.007 9	-
6 845	179	802.11ax	F	Open	40	MCS0	11.0	10.23	0.15	Left	5	0.000 4	-
7 085	227	802.11ax	F	Open	40	MCS0	11.0	9.87	0.15	Left	5	0.007 9	-
7 085	227	802.11ax	H	Open	40	MCS0	11	10.75	0.11	Rear	5	0.000 5	-
7 085	227	802.11ax	H	Open	40	MCS0	11	10.75	0.00	Front	5	0.016 4	-
7 085	227	802.11ax	H	Open	40	MCS0	11	10.75	0.00	Right	5	0.000 2	-
7 085	227	802.11ax	H	Open	40	MCS0	11	10.75	0.15	Top	5	0.000 0	-
5 965	3	802.11ax	H	Open	40	MCS0	11	10.11	0.00	Right	5	N/A	-
6 165	43	802.11ax	H	Open	40	MCS0	11	9.92	-0.16	Right	5	0.011 1	-
6 525	115	802.11ax	H	Open	40	MCS0	11	10.14	-0.11	Right	5	0.000 6	-
6 845	179	802.11ax	H	Open	40	MCS0	11	10.22	-0.12	Right	5	0.010 5	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.19	Rear	5	0.000 6	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.12	Front	5	0.000 0	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.14	Right	5	0.009 3	-
7 085	227	802.11ax	H	Close	40	MCS0	11.0	10.75	0.17	Bottom	5	0.000 2	-
5 965	3	802.11ax	H	Close	40	MCS0	11.0	10.11	0.18	Right	5	N/A	-
6 165	43	802.11ax	H	Close	40	MCS0	11.0	9.92	0.16	Right	5	0.030 2	-
6 525	115	802.11ax	H	Close	40	MCS0	11.0	10.14	0.13	Right	5	0.020 3	-
6 845	179	802.11ax	H	Close	40	MCS0	11.0	10.22	0.18	Right	5	0.026 0	-

13.3 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 at 5 mm separation distance, so 10g Phablet SAR is not required per FCC KDB 941225 D07 UMPC Mini Tablet v01r02.
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.
12. Per FCC guidance SAR was performed using 6.5 GHz SAR probe calibration factors. Per October 2020 TCBC Workshop notes, 5 channels were tested. Absorbed power density (APD) using a 4 cm² averaging area is reported based on SAR measurements.
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. This device supports LTE Carrier Aggregation (CA) in Uplink for LTE Band 41C with two component carriers in the uplink. SAR measurements and conducted powers were evaluated per Fall 2017 TCBC Workshop notes (LTE Carrier aggregation).
For LTE Band per 2018 TCBC Workshop notes, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active.
Because the maximum output for UL CA of LTE Band 48C is $\leq$ standalone LTE mode (without CA), SAR for LTE Band 41C Up link CA was performed at the highest standalone SAR configuration without CA and also UL CA SAR is not required for all required test channels, Because the reported SAR for UL CA configuration is < 1.4 W/kg.
The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.
10. SAR test reduction is applied using the following criteria:

Start with the largest channel Bandwidth and measure SAR for QPSK with 1 RB, and 50 % RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50 % RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel Bandwidths is not required because the reported SAR for the highest channel Bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel Bandwidth.

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.

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.
6. WIFI 6 GHz operations are supported by SISO and MIMO both. WLAN Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required.
7. For testing the WIFI 6 GHz of this DUT, the selection of test channels was based on FCC guidance, with five channels selected across the entire WIFI 6 GHz Bands.
8. 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.
9. For testing the WIFI 6 GHz of this DUT, the selection of test channels was based on FCC guidance, with five channels selected across the entire WIFI 6 GHz Bands.

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.

13.4 6 GHz WLAN Power Density Results

6 GHz WLAN Power Density																			
Frequency		Mode	Ant.	Form Factor	Bandwidth (MHz)	Data Rate (Mbps)	Tune-In Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Distance (mm)	Test Position	Duty Cycle	Grid Step (λ)	Scaling Factor for Measurement Uncertainty per IEC 62479	Normal nsPD (mW/cm ²)	Scaled Normal nsPD (mW/cm ²)	Total nsPD (mW/cm ²)	Reported 4 cm nsPD (mW/cm ²)	Plnt. No.
MHz	Ch.																		
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.11	2	Rear	99.6	0.044	1.116	0.0454	0.051	0.088	0.099	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.01	2	Front	99.6	0.044	1.116	0.0429	0.048	0.094	0.105	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.02	2	Left	99.6	0.044	1.116	0.0926	0.103	0.198	0.221	-
6 525	115	802.11ax	F	Open	40	MCS0	11.0	10.69	0.02	2	Top	99.6	0.044	1.116	0.0373	0.042	0.069	0.077	-
5 965	3	802.11ax	F	Open	40	MCS0	11.0	10.24	0.00	2	Left	99.6	0.041	1.116	0.115	0.128	0.216	0.241	-
6 165	43	802.11ax	F	Open	40	MCS0	11.0	10.51	-0.18	2	Left	99.6	0.042	1.116	0.144	0.161	0.311	0.347	D3
6 845	179	802.11ax	F	Open	40	MCS0	11.0	10.21	0.11	2	Left	99.6	0.047	1.116	0.0665	0.074	0.131	0.146	-
7 085	227	802.11ax	F	Open	40	MCS0	11.0	10.04	-0.12	2	Left	99.6	0.048	1.116	0.0679	0.076	0.125	0.140	-
6 165	43	802.11ax	F	Close	40	MCS0	11.0	10.91	-0.14	2	Left	99.6	0.042	1.116	0.121	0.135	0.252	0.281	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	9.94	0.02	2	Rear	99.6	0.048	1.116	0.0238	0.027	0.052	0.058	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	9.94	-0.10	2	Front	99.6	0.048	1.116	0.0936	0.104	0.137	0.153	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	9.94	-0.09	2	Right	99.6	0.048	1.116	0.0461	0.051	0.099	0.110	-
7 085	227	802.11ax	H	Open	40	MCS0	11.0	9.94	-0.14	2	Top	99.6	0.048	1.116	0.0343	0.038	0.0827	0.092	-
5 965	3	802.11ax	H	Open	40	MCS0	11.0	9.72	-0.12	2	Right	99.6	0.041	1.116	0.0477	0.053	0.119	0.133	-
6 165	43	802.11ax	H	Open	40	MCS0	11.0	9.62	-0.15	2	Right	99.6	0.042	1.116	0.0855	0.095	0.132	0.147	-
6 525	115	802.11ax	H	Open	40	MCS0	11.0	9.69	-0.10	2	Right	99.6	0.044	1.116	0.0471	0.053	0.137	0.153	-
6 845	179	802.11ax	H	Open	40	MCS0	11.0	9.76	-0.13	2	Right	99.6	0.047	1.116	0.0647	0.072	0.185	0.206	-
6 845	179	802.11ax	H	Close	40	MCS0	11.0	9.94	0.01	2	Rear	99.6	0.047	1.116	0.0116	0.013	0.029	0.032	-
47 CFR § 1.1310 – Safety Limit Spatial Average Uncontrolled Exposure/ General Population													Power Density 1mW/cm ² Averaged over 4 cm ²						

Power Density Notes:

1. The manufacturer has confirmed that the device tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.

2. Batteries are fully charged at the beginning of the measurements. The DUT was connected to a wall charger for some measurements due to the test duration. It was confirmed that the charger plugged into this DUT did not impact the near-field PD test results.

3. DASY6 Module mmWave is optimized for incident Power Density (PD) evaluations EUT at distances as close as 2mm for frequencies in the 6–110 GHz range.

The software Module mmWave V3.0+ features the novel Equivalent Source Reconstruction (ESR) method: This new method will greatly simplify compliance testing for distances as close as $\lambda/25$ (2mm at 6 GHz) from any surface and improve the overall flexibility and precision.

With this method, the reconstruction uncertainty (REC) is below 0.6 dB for $d > \lambda/25$, corresponding to a test distance of 2mm at 6 GHz. The above-mentioned REC value is valid if the following conditions on the grid resolution (ℓ_{grid}) and grid extent (ν_{grid}) are met:

$$\ell_{\text{grid}} = \begin{cases} 1.25d & \text{for } d < \lambda/10 \\ \lambda/8 & \text{for } d \geq \lambda/10 \end{cases}.$$

$$\nu_{\text{grid}} \geq 2\lambda$$

Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.

4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.

5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty >30%. Total expanded uncertainty of 1.51 dB(41.6%) was used to determine the psPD measurement scaling factor.

14. SAR Measurement Variability and Uncertainty

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

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

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg for 1g SAR or ≥ 3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Body SAR measurement variability Results

Frequency		Mode,Band/Configuration	Position	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
836.5	20525	LTE Band 5 QPSK 10MHz 1RB 24offset	Rear	0.835	0.834	1.00
782.0	23230	LTE Band 13 QPSK 10MHz 1RB 24offset	Rear	1.020	0.987	1.03
1 770	132572	LTE Band 66 QPSK 20MHz 100RB 0offset	Bottom	0.823	0.823	1.00
2 592.99	518598	NR Band n41 CP QPSK 100MHz 1RB 1offset	Right	0.969	0.969	1.00
2 592.99	518598	NR Band n41 DFT-s QPSK 100MHz 1RB 1offset	Right	0.953	0.805	1.18

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.

For SAR Measurement Uncertainty for Frequencies Above 6 GHz

Measurement Uncertainty for handset SAR test									
According to IEEE 1528 and IEC 62209-1528 (6 - 10 GHz range)									
a	b	c	d	e	f	g	h = c x f / e	i = c x g / e	k
Source of uncertainty	Symbol	Uncertainty ± %	Probability distribution	Div.	c _i	c _i	Standard Uncertainty ± % (1 g)	Standard Uncertainty ± % (10 g)	v _i or v _{eff}
Description					(1 g)	(10 g)			
Measurement system									
Probe calibration	CF	18.60	N	2	1	1	9.30	9.30	∞
Probe Calibration Drift	CFdrift	1.70	N	1	1	1	1.00	1.00	∞
Probe Linearity	LIN	4.70	R	1.73	1.00	1.00	2.71	2.71	∞
Broadband Signal	BBS	3.00	R	1.73	1.00	1.00	1.73	1.73	∞
Probe Isotropy	ISO	7.60	R	1.73	1	1	4.39	4.39	∞
Data Acquisition	DAE	2.40	N	1	1	1	2.40	2.40	∞
RF Ambient	AMB	1.80	N	1	1	1	1.80	1.80	∞
Probe Positioning	Δ _{sys}	0.20	N	1	0.33	0.33	0.07	0.07	∞
Data Processing	DAT	3.50	N	1	1	1	3.50	3.50	∞
Phantom and Device Errors									
Conductivity (meas.)DAK	LIQ(σ)	2.50	N	1	0.78	0.71	1.95	1.78	∞
Conductivity (temp.)BB	LIQ(Tσ)	3.40	R	1.73	0.78	0.71	1.53	1.39	∞
Phantom Permittivity	EPS	14.00	R	1.73	0.25	0.25	2.02	2.02	∞
Distance DUT - TSL	DAS	2.00	N	1	2	2	4.00	4.00	∞
Device Holder	H	3.60	N	1	1	1	3.60	3.60	∞
DUT Modulation	MOD	2.40	R	1.73	1	1	1.39	1.39	∞
DUT drift	RFdrift	2.50	N	1	1	1	2.50	2.50	∞
Deviation to Target	C(ε, σ)	1.90	N	1	1	0.84	1.90	1.60	∞
SAR scaling	C(R)	0.00	R	1.73	1	1	0.00	0.00	∞
Combined standard uncertainty	u(ΔSAR)		RSS				13.72	13.65	
Expanded uncertainty (95% confidence interval)	U		k = 2				27.44	27.30	

For Power Density Measurements Uncertainty for Frequencies Above 6GHz

DASY6 Uncertainty Budget for PD (avg $\geq 1\text{cm}^2$)						
Evaluation Distances to the Antennas $\geq \lambda/25$ in Compliance with IEC/IEEE 63195						
Source of uncertainty Description	Uncertainty ($\pm\text{dB}$)	Probability distribution	Div.	c/	Standard Uncertainty ($\pm\text{dB}$)	(vi) veff
Uncertainty terms dependent on the measurement system						
Calibration	0.49	N	1	1	0.49	∞
Probe correction	0.00	R	1.73	1	0.00	∞
Frequency response ($\text{BW} \leq 1\text{ GHz}$)	0.20	R	1.73	1	0.12	∞
Sensor cross coupling	0.00	R	1.73	1	0.00	∞
Isotropy	0.50	R	1.73	1	0.29	∞
Linearity	0.20	R	1.73	1	0.12	∞
Probe scattering	0.00	R	1.73	1	0.00	∞
Probe positioning offset	0.30	R	1.73	1	0.17	∞
Probe positioning repeatability	0.04	N	1	1	0.04	∞
Sensor mechanical offset	0.00	N	1	1	0.00	∞
Probe spatial resolution	0.00	N	1	1	0.00	∞
Field impedance dependence	0.00	N	1	1	0.00	∞
Measurement drift	0.05	N	1	1	0.05	∞
Amplitude and phase noise	0.04	N	1	1	0.04	∞
Measurement area truncation	0.00	N	1	1	0.00	∞
Data acquisition	0.03	N	1	1	0.03	∞
Sampling	0.00	N	1	1	0.00	∞
Field reconstruction	0.60	N	1	1	0.60	∞
Signal-to-Noise Ratio	0.00	N	1	1	0.00	∞
Spatial averaging	0.10	N	1	1	0.10	∞
Uncertainty terms dependent on the DUT and environmental factors						
Probe coupling with DUT	0.00	R	1.73	1	0.00	∞
Modulation response	0.40	R	1.73	1	0.23	∞
Integration time	0.00	R	1.73	1	0.00	∞
Response time	0.00	N	1.73	1	0.00	∞
Device holder influence	0.10	R	1.73	1	0.06	∞
DUT alignment	0.00	R	1.73	1	0.00	∞
RF ambient conditions	0.04	R	1.73	1	0.02	∞
Laboratory Temperature	0.05	R	1.73	1	0.03	∞
Laboratory Reflections	0.04	R	1.73	1	0.02	∞
Immunity / secondary reception	0.00	R	1.73	1	0.00	∞
Drift of the DUT	-	R	1.73	1	-	∞
Combined uncertainty ($k=1$)					0.75	∞
Expanded uncertainty($k=2$)					1.51	

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	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX60	F/20/0018446/C/001	N/A	N/A	N/A
Staubli	CS8Cspeag-TX60L	F10/5D1CA1/C/01	N/A	N/A	N/A
Staubli	TX90 Lspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	TX60 Lspeag	F/20/0018446/A/001	N/A	N/A	N/A
Staubli	TX60 XLSpeag	F10/5D1CA1/A/01	N/A	N/A	N/A
Staubli	D21142603	S-1203 0309	N/A	N/A	N/A
Staubli	D2114210603	S-1206 0513	N/A	N/A	N/A
Staubli	D21142605	S-1338 1332	N/A	N/A	N/A
Staubli	D21142606B	010963	N/A	N/A	N/A
Staubli	D21143300	S-0008	N/A	N/A	N/A
Staubli	D21142608A	020885	N/A	N/A	N/A
Staubli	D21142106	S-0123	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331953309	01/16/2025	Annual	01/16/2026
TESTO	175-H1/Thermometer	40331915309	12/25/2024	Annual	12/25/2025
TESTO	175-H1/Thermometer	40331949309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	44606611906	03/20/2025	Annual	03/20/2026
TESTO	175-H1/Thermometer	44606559906	03/20/2025	Annual	03/20/2026
SPEAG	DAE4	1750	09/13/2024	Annual	09/13/2025
SPEAG	DAE4	1687	07/12/2024	Annual	07/12/2025
SPEAG	DAE4	869	03/19/2025	Annual	03/19/2026
SPEAG	DAE4	868	09/19/2024	Annual	09/19/2025
SPEAG	DAE4	1720	04/23/2025	Annual	04/23/2026
SPEAG	DAE4	780	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe ES3DV3	3076	07/17/2024	Annual	07/17/2025
SPEAG	E-Field Probe EX3DV4	7679	08/22/2024	Annual	08/22/2025
SPEAG	E-Field Probe EX3DV4	7622	11/22/2024	Annual	11/22/2025
SPEAG	E-Field Probe EX3DV4	7732	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe EX3DV4	7309	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe EX3DV4	7702	01/21/2025	Annual	01/21/2026
SPEAG	E-Field Probe EUmmWV4	9464	02/24/2025	Annual	02/24/2026
SPEAG	CLA13	1016	11/19/2024	Annual	11/19/2025
SPEAG	Dipole D750V3	1014	05/20/2024	Annual	05/20/2025
SPEAG	Dipole D835V2	4d165	04/14/2025	Annual	04/14/2026
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 D5GHzV2	1107	04/19/2024	Biennial	04/19/2026
SPEAG	Dipole D6.5GHzV2	1012	09/17/2024	Annual	09/17/2025

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	5G Power Verification Source 10GHz	1018	04/11/2025	Annual	04/11/2026
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Power Meter N1911A	MY45101406	05/21/2024	Annual	05/21/2025
Agilent	Power Meter N1911A	MY45101406	05/19/2025	Annual	05/19/2026
Agilent	Power Sensor 8481A	SG1091286	09/12/2024	Annual	09/12/2025
H.P	Power Sensor 8481A	MY41090675	09/12/2024	Annual	09/12/2025
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Wideband Power Sensor N1921A	MY55220026	07/30/2024	Annual	07/30/2025
Agilent	11636B/Power Divider	58698	01/13/2025	Annual	01/13/2026
SPEAG	DAKS 3.5	1038	01/20/2025	Annual	01/20/2026
SPEAG	Vector Reflectometer	0141013	01/13/2025	Annual	01/13/2026
SPEAG	MXA Signal Analyzer	MY49100108	01/07/2025	Annual	01/07/2026
H.P	Network Analyzer /8753E	JP38451384	08/20/2024	Annual	08/20/2025
Protek	NETWORK ANALYZER	X11-15305	02/10/2025	Annual	02/10/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/11/2024	Annual	09/11/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2024	Annual	07/29/2025
R&S	Wireless Communication Test Set CMW500	115733	03/20/2025	Annual	03/20/2026
R&S	Wireless Communication Test Set CMW500	139333	12/09/2024	Annual	12/09/2025
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/18/2025	Annual	03/18/2026
Keysight	PSG Vector Signal Generator	MY50350097	03/05/2025	Annual	03/05/2026
EMPOWER	RF Power Amplifier	1084	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-15N	10453	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-30N	-	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-60N	32011	09/11/2024	Annual	09/11/2025
Agilent	Attenuator (3dB) 8693B	MY39260298	08/20/2024	Annual	08/20/2025
HP	Attenuator (20dB) 8493C	09271	08/21/2024	Annual	08/21/2025
Agilent	Directional Bridge 86205A	3140A04581	04/18/2025	Annual	04/18/2026
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/04/2024	Annual	06/04/2025
Keysight	MXA Signal Analyzer N9020A	MY54500663	12/24/2024	Annual	12/24/2025
HP	Dual Directional Coupler	16072	09/11/2024	Annual	09/11/2025
Anritsu	Radio Communication Test Station MT8000A	6262036812	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Test Station MT8000A	6262148305	12/23/2024	Annual	12/23/2025
Anritsu	Radio Communication Test Station MT8000A	6261967108	04/21/2025	Annual	04/21/2026
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	6262044720	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Tester MT8821C	6201664725	01/13/2025	Annual	01/13/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/22/2024	Annual	05/22/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/20/2025	Annual	05/20/2026
R&S	BLUETOOTH TESTER CBT	100272	01/13/2025	Annual	01/13/2026

* 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-2506-FC006-P