

TEST REPORT

FCC SAR Part 1 Test for SM-F766B
Class II Permissive Change

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2506-FC013

DATE OF ISSUE
June 18, 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

A3LSMF766B

Applicant

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

Product Name

Mobile Phone

Model Name

SM-F766B

Application Type

Class II Permissive Change

Date of Test

Jun. 09, 2025 ~ Jun. 17, 2025

Location of Test

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

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 18, 2025	Initial Release

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

2. Test Location

2.1 Test Laboratory

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

2.2 Test Facilities

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

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

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-F766B
Equipment Type	Mobile Phone
FCC ID	A3LSMF766B
Application Type	Class II Permissive Change
Applicant	SAMSUNG Electronics Co., Ltd.
Note	The spot check is performed on the band with the change of the sub5 antenna, and the full test is performed on the band where the result is higher than the basic model [Report no: HCT-SR-2505-FC008-R2]. The C2PC changes in this model do not affect the Main TAS algorithm and can be represented by the original model's TAS test report. [Report no: HCT-SR-2505-FC009] Please refer to the technical documentation for detailed C2PC changes

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
UMTS Band 4	1 712.4 MHz ~ 1 752.6 MHz	PCE	0.27	0.47	0.47
UMTS Band 2	1 852.4 MHz ~ 1 907.6 MHz	PCE	0.26	0.46	0.46
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCE	N/A	N/A	N/A
LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCE	N/A	N/A	N/A
LTE FDD Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCE	0.36	0.35	0.50
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCE	0.23	0.80	0.80
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCE	0.29	0.35	0.35
NR FDD Band n2 (PCS)	1 852.5 MHz ~ 1 907.5 MHz	PCE	N/A	N/A	N/A
NR FDD Band n25 (PCS)	1 852.5 MHz ~ 1 912.5 MHz	PCE	0.29	0.16	0.50
NR TDD Band n41	2 506.02 MHz ~ 2 679.99 MHz	PCE	0.75	0.47	0.79
NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz	PCE	0.19	0.29	0.47
NR TDD Band n77	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCE	N/A	N/A	0.27
Simultaneous SAR per KDB 690783 D01v01r03			1.580	1.588	1.598
Date(s) of Tests:			Jun. 09, 2025 ~ Jun. 17, 2025		

Only operations relevant to this permissive change were evaluated for compliance. Please see the original compliance evaluation in Part 1 SAR Report [No. HCT-SR-2505-FC008-R2] for complete evaluation of all other operating modes. The operation description includes a description of all changed items.

Summary table of SAR measurement results for C2PC		
SAR test Configuration	The Highest SAR (W/kg)	Distance (mm)
Head SAR	0.75	
Body-worn accessory	0.80	5
Product specific(wireless router)	0.80	5
Simultaneous transmission	1.598	

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 17	Voice / Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
NR FDD Band n2 (PCS)	Voice / Data	1 852.5 MHz ~ 1 907.5 MHz
NR FDD Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n25 (PCS)	Voice / Data	1 852.5 MHz ~ 1 912.5 MHz
NR TDD Band n41	Voice / Data	2 501.01 MHz ~ 2 685 MHz
NR FDD Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Voice / Data	3 445.01 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
U-NII-4	Voice / Data	5 845 MHz ~ 5 885 MHz
U-NII-5	Voice / Data	5 935 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 ~ 2 472 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 (Manufacturer: ATL)	
Device Serial Numbers	Mode	Serial Number
	UMTS BAND 2, 4 LTE Band 25,41,66 NR Band n25, n41, n66, n77	YEE0652M, YEE0660M
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Time-Averaging Algorithm for RF Exposure Compliance

This WWAN Mode of DUT is equipped with an S.LSI chipset to which the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm is applied. and also This equipment contains the Qualcomm modem supporting Qualcomm Fast Connect TAS for WLAN.

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

The Samsung S.LSI proprietary TAS algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target 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).

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 Fast Connect TAS algorithm for TAS operations This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. DUT contains BDF File configured for the Qualcomm Fast Connect TAS algorithm. Only the BT mode of the device did not apply the time averaged SAR algorithm.

The Samsung S.LSI TAS algorithm and Qualcomm Fast Connect TAS algorithm allow the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit NV settings and maximum tune up output power Pmax configured for this DUT for various transmit conditions (Radio SAR 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

The Plimit and Pmax changed by the C2PC change of DUT are as shown in the table 4-1.

For the Plimit and Pmax results of all other antennas and bands, please refer to the performance report of the original model[Report no: [No. HCT-SR-2505-FC008-R2]

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)	Body Worn (Open Body / Closed Body)	Hotspot (Open Body / Closed Body)	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	RSI=1	RSI=0,3	RSI=2,4	
NR TDD SRS 1	n41	I	11.0	24.0	21.4	13.0
NR TDD SRS 1	n41	B	11.0	23.0	22.9	13.0
NR TDD SRS 0	n77	F	N/A	N/A	13.5	26.5
NR TDD SRS 1	n77	I	N/A	N/A	13.5	26.5
NR TDD SRS 2	n77	E	N/A	N/A	13.5	26.5
NR TDD SRS 3	n77	C	N/A	N/A	13.5	25.5
NR TDD SRS 0	n77(DoD)	F	N/A	N/A	13.5	26.5
NR TDD SRS 1	n77(DoD)	I	N/A	N/A	13.5	26.5
NR TDD SRS 2	n77(DoD)	E	N/A	N/A	13.5	26.5
NR TDD SRS 3	n77(DoD)	C	N/A	N/A	13.5	25.5

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., LTE TDD).
2. The maximum time-averaged output power (dBm) for any 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.

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. The Target Power of the bands affected by the C2PC change of the DUT are as follows:

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

A. UMTS Modes

UMTS Band 4 (1750 MHz) _Antenna I				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	23.0	22.5	22.5	22.5
RSI = 0 (Open Free)	19.5	18.5	18.5	18.5
RSI = 1 (Open RCV)	17.5	17.0	16.0	17.0
RSI = 2 (Open Hotspot)	19.5	18.5	18.5	18.5
RSI = 3 (Close Free)	19.5	18.5	18.5	18.5
RSI = 4 (Close Hotspot)	19.5	18.5	18.5	18.5

UMTS Band 2 (1900 MHz) _Antenna I				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	23.0	22.5	22.5	22.5
RSI = 0 (Open Free)	18.5	18.0	18.0	18.0
RSI = 1 (Open RCV)	17.0	16.5	16.5	16.5
RSI = 2 (Open Hotspot)	18.5	18.0	18.0	18.0
RSI = 3 (Close Free)	18.5	18.0	18.0	18.0
RSI = 4 (Close Hotspot)	18.5	18.0	18.0	18.0

Tolerance: -1.5 dB ~ +1.0 dB

B. 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 66	I	25.0	19.5	17.5	19.5	19.5	19.5
LTE Band 4	I	25.0	19.5	17.5	19.5	19.5	19.5
LTE Band 25	I	24.5	18.5	17.0	18.5	18.5	18.5
LTE Band 2	I	24.5	18.5	17.0	18.5	18.5	18.5
LTE Band 41 PC3	I	24.5	19.5	16.8	19.5	19.5	19.5
LTE Band 41 PC2	I	26.0	21.1	18.4	21.1	21.1	21.1

Tolerance: -1.5 dB ~ +1.0 dB

C. 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 n66	I	25.0	19.5	17.5	19.5	19.5	19.5
NR Band n25	I	24.5	18.5	17.0	18.5	18.5	18.5
NR Band n2	I	24.5	18.5	17.0	18.5	18.5	18.5
NR Band n41	B	24.0	19.5	23.5	19.5	19.5	19.5
NR Band n41	I	13.0	13.0	11.0	13.0	13.0	13.0
NR Band n41	C	24.0	21.0	23.0	21.0	21.0	21.0
NR Band n41	G	18.0	15.0	17.0	15.0	15.0	15.0
NR Band n41(PS)	I	23.0	17.0	14.8	17.0	17.0	17.0
NR Band n41(PS)	B	13.0	13.0	11.0	13.0	13.0	13.0
NR Band n41(PS)	G	24.0	19.0	16.0	19.0	19.0	19.0
NR Band n41(PS)	C	23.0	17.0	14.0	17.0	17.0	17.0
NR Band n77(PC2)	F	26.5	16.5	13.5	13.5	16.5	13.5
NR Band n77(PC2)	I	26.5	16.5	13.5	13.5	16.5	13.5
NR Band n77(PC2)	E	26.5	16.5	13.5	13.5	16.5	13.5
NR Band n77(PC2)	C	25.5	16.5	13.5	13.5	16.5	13.5

Tolerance: -1.5 dB ~ +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 25	1 850.7 MHz ~ 1 914.3 MHz
	LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz
	LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz
Channel Bandwidths	LTE FDD Band 2 (PCS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 4 (AWS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 25	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 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 (18900)		1 909.3 (19193)	
	3 MHz	1 851.5 (18615)		1 880 (18900)		1 908.5 (19185)	
	5 MHz	1 852.5 (18625)		1 880 (18900)		1 907.5 (19175)	
	10 MHz	1 855 (18650)		1 880 (18900)		1 905 (19150)	
	15 MHz	1 857.5 (18675)		1 880 (18900)		1 902.5 (19125)	
	20 MHz	1 860 (18700)		1 880 (18900)		1 900 (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 (20000)		1 732.5 (20175)		1 750 (20350)	
	15 MHz	1 717.5 (20025)		1 732.5 (20175)		1 747.5 (20325)	
	20 MHz			1 732.5 (20175)			
LTE FDD Band 25(PCS)	1.4 MHz	1 850.7 (26047)		1 882.5 (26365)		1 914.3 (26683)	
	3 MHz	1 851.5 (26055)		1 882.5 (26365)		1 913.5 (26675)	
	5 MHz	1 852.5 (26065)		1 882.5 (26365)		1 912.5 (26665)	
	10 MHz	1 855 (26090)		1 882.5 (26365)		1 910 (26640)	
	15 MHz	1 857.5 (26115)		1 882.5 (26365)		1 907.5 (26615)	
	20 MHz	1 860 (26140)		1 882.5 (26365)		1 905 (26590)	
LTE FDD Band 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 (132022)		1 745 (132322)		1 775 (132622)	
	15 MHz	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)	
	20 MHz	1 720 (132072)		1 745 (132322)		1 770 (132572)	
LTE TDD Band 41	5 MHz	2 506(39750)	2 549.5(40185)	2 593(40620)	2 636.5(41055)	2 680(41490)	
	10 MHz	2 506(39750)	2 549.5(40185)	2 593(40620)	2 636.5(41055)	2 680(41490)	
	15 MHz	2 506(39750)	2 549.5(40185)	2 593(40620)	2 636.5(41055)	2 680(41490)	
	20 MHz	2 506(39750)	2 549.5(40185)	2 593(40620)	2 636.5(41055)	2 680(41490)	

Item.	Description
UE Category	LTE Rel. 16, DL: Category 20, UL: Category 18
HPUE Power Class	Power Class 2
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256 QAM
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3	Yes
A-MPR disabled for SAR Testing.	Yes
LTE Carrier Aggregation	This device supports Inter-Band & Intra-Band DL-link Carrier aggregations and intra-Band UL-link Carrier aggregations.
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 eICl, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.

4.6 5G NR SUB 6 Information

Item.		Description
Frequency Range	NR FDD Band n2 (PCS)	1 852.5 MHz ~ 1 907.5 MHz
	NR FDD Band n25 (PCS)	1 852.5 MHz ~ 1 912.5 MHz
	NR TDD Band n41	2 501.01 MHz ~ 2 685 MHz
	NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz
Channel Bandwidths	NR FDD Band n2 (PCS)	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR FDD Band n25 (PCS)	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz
	NR TDD Band n41	10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz
	NR FDD Band n66	5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz

Ch. No.& Freq.(MHz)	Low / Low-Mid		Mid		Mid-High / High
NR FDD Band n2 (PCS)	5 MHz	1 852.5(370500)	1 880(376000)		1 907.5(381500)
	10 MHz	1 855(371000)	1 880(376000)		1 905(381000)
	15 MHz	1 857.5(371500)	1 880(376000)		1 902.5(380500)
	20 MHz	1 860(372000)	1 880(376000)		1 900(380000)
	25 MHz	1 862.5(372500)	1 880(376000)		1 897.5(379500)
	30 MHz	1 865(373000)	1 880(376000)		1 895(379000)
	35 MHz	1 867.5(373500)	1 880(376000)		1 892.5(378500)
	40 MHz	1 870(374000)	1 880(376000)		1 890(378000)
NR FDD Band n25	5 MHz	1 852.5(370500)	1 882.5(376500)		1 912.5(382500)
	10 MHz	1 855(371000)	1 882.5(376500)		1 910(382000)
	15 MHz	1 857.5(371500)	1 882.5(376500)		1 907.5(381500)
	20 MHz	1 860(372000)	1 882.5(376500)		1 905(381000)
	25 MHz	1 862.5(372500)	1 882.5(376500)		1 902.5(380500)
	30 MHz	1 865(373000)	1 882.5(376500)		1 900(380000)
	35 MHz		1 882.5(376500)		
	40 MHz		1 882.5(376500)		
NR TDD Band n41	10 MHz	2 501.01(500202)	2 547(509400)	2 592.99(518598)	2 639.01(527802)
	15 MHz	2 503.5(500700)	2 548.26(509652)	2 592.99(518598)	2 637.75(527550)
	20 MHz	2 506.02(501204)	2 549.49(509898)	2 592.99(518598)	2 636.49(527298)
	25 MHz	2 508.51(501702)	2 550.75(510150)	2 592.99(518598)	2 635.23(527046)
	30 MHz	2 511(502200)	2 552.01(510402)	2 592.99(518598)	2 634(526800)
	40 MHz	2 516.01(503202)	2 567.34(513468)		2 618.67(523734)
	50 MHz	2 521.02(504204)		2 592.99(518598)	
	60 MHz	2 526(505200)		2 592.99(518598)	
	70 MHz	2 531.01(506202)			
	80 MHz	2 536.02(507204)			
	90 MHz	2 541(508200)			
	100 MHz			2 592.99(518598)	
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)

Ch. No.& Freq.(MHz)	Low / Low-Mid		Mid		Mid-High / High		
NR TDD Band n77	10 MHz	3 705(647000)	3 759(650600)	3 813(654200)	3 867(657800)	3 921(661400)	3 975(665000)
	15 MHz	3 707.52(647168)	3 760.5(650700)	3 813.51(654234)	3 866.49(657766)	3 919.5(661300)	3 972.48(664832)
	20 MHz	3 710.01 (647334)	3 762 (650800)	3 813.99(654266)	3 866.01 (657734)	3 918 (661200)	3 969.99 (664666)
	25 MHz	3 712.5(647500)	3 763.5(650900)	3 814.5(654300)	3 865.5(657700)	3 916.5(661100)	3 967.5(664500)
	30 MHz	3 715.02 (647668)	3 765 (651000)	3 815.01(654334)	3 864.99 (657666)	3 915 (661000)	3 964.98 (664332)
	40 MHz	3 720 (648000)	3 768 (651200)	3 816 (654400)	3 864 (657600)	3 912 (660800)	3 960 (664000)
	50 MHz	3 725.01 (648334)	3 782.49 (652166)	3 840 (656000)		3 897.51 (659834)	3 954.99 (663666)
	60 MHz	3 730.02 (648668)	3 803.34(653556)			3 876.66(658444)	3 949.98 (663332)
	70 MHz	3 735 (649000)	3 804.99 (654336)			3 875.01 (658334)	3 945(663000)
	80 MHz	3 740.01 (649334)		3 840 (656000)			3 939.99 (662666)
	90 MHz	3 745.02 (649668)		3 840 (656000)		3 934.98 (662332)	
100 MHz	3 750 (650000)		3 840 (656000)		3 930 (662000)		
NR TDD Band n77 (DoD)	10 MHz	3 455.01(630334)		3 500.01(633334)		3 544.98(636332)	
	15 MHz	3 457.5(630500)		3 500.01(633334)		3 542.49(636166)	
	20 MHz	3 460.02 (630668)		3 500.01 (633334)		3 540 (636000)	
	25 MHz	3 462.99(630866)		3 500.01(633334)		3 537(635800)	
	30 MHz	3 465 (631000)		3 500.01 (633334)		3 534.99 (635666)	
	40 MHz	3 470.01 (631334)				3 529.98 (635332)	
	50 MHz	3 475.02 (631668)				3 525 (635000)	
	60 MHz			3 500.01 (633334)			
	70 MHz			3 500.01 (633334)			
	80 MHz			3 500.01 (633334)			
	90 MHz			3 500.01 (633334)			
	100 MHz			3 500.01 (633334)			

Item.	Description
NR FDD Band n2/n25/n66 SCS	15 kHz
NR TDD Band n41/n77 SCS	30 kHz
3GPP Rel.	Rel.16
A-MPR disabled for SAR Testing.	Yes
5G NR UL/DL FR1	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM DFT-s-OFDM: $\pi/2$ -BPSK(UL Only), QPSK, 16QAM, 64QAM, 256QAM
Non-Standalone & Standalone are supported. 5G NR FR1 Bands are supported to NSA and SA Connectivity. More detailed specifications of the 5G NR bands are contained in the Technical description document.	
EN-DC Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations
LTE Anchor Bands for NR Band n2 (PCS)	LTE Band 4/5/12/13/66
LTE Anchor Bands for NR Band n25	LTE Band 12
LTE Anchor Bands for NR Band n41	LTE Band 2/4/5/12/66
LTE Anchor Bands for NR Band n66 (AWS)	LTE Band 2/5/12/13

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
SUB5 [Ant I]	UMTS Band 4	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	UMTS Band 2	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE FDD Band 2 (PCS)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE FDD Band 4 (AWS)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE FDD Band 25 (PCS)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE TDD Band 41 (PC3)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE TDD Band 41 (PC2)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	LTE FDD Band 66 (AWS)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	NR FDD Band n2 (PCS)	Yes	Yes	No	Yes	No	Yes
SUB5 [Ant I]	NR FDD Band n25 (PCS)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR TDD Band n41 (PC3 only)	Yes	Yes	No	Yes	No	Yes
MAIN3 [Ant C]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB3 [Ant G]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	No	Yes
SUB5 [Ant I]	NR TDD Band n41 (PC3 only)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB3 [Ant G]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	No	Yes
MAIN3 [Ant C]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR FDD Band n66	Yes	Yes	No	Yes	No	Yes
SUB2 [Ant F]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	No	Yes
SUB5 [Ant I]	NR TDD Band n77 (PC2 only)	Yes	Yes	No	Yes	No	Yes
SUB1 [Ant E]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	No	Yes
MAIN3 [Ant C]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	Yes	No

◆ Folder Close

Antenna	Mode	Rear	Front	Left	Right	Bottom	Top
SUB5 [Ant I]	UMTS Band 4	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	UMTS Band 2	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	LTE FDD Band 2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	LTE FDD Band 4 (AWS)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	LTE FDD Band 25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	LTE TDD Band 41 (PC3)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	LTE FDD Band 66 (AWS)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	NR FDD Band n2 (PCS)	Yes	Yes	No	Yes	Yes	Yes
SUB5 [Ant I]	NR FDD Band n25 (PCS)	Yes	Yes	No	Yes	Yes	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB5 [Ant I]	NR TDD Band n41 (PC3 only)	Yes	Yes	No	Yes	No	Yes
MAIN3 [Ant C]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB3 [Ant G]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	No	Yes
SUB5 [Ant I]	NR TDD Band n41 (PC3 only)	Yes	Yes	No	Yes	No	Yes
MAIN2 [Ant B]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB3 [Ant G]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	No	Yes
MAIN3 [Ant C]	NR TDD Band n41 (PC3 only)	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	No	Yes
SUB5 [Ant I]	NR TDD Band n77 (PC2 only)	Yes	Yes	No	Yes	No	Yes
SUB1 [Ant E]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	No	Yes
MAIN3 [Ant C]	NR TDD Band n77 (PC2 only)	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	No	Yes
SUB5 [Ant I]	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	No	Yes	No	Yes
SUB1 [Ant E]	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	No	Yes
MAIN3 [Ant C]	NR TDD Band n77 DoD (PC2 only)	Yes	Yes	Yes	No	Yes	No

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

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

4.8 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/6GHz 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/ VoNR.
9. LTE + 5G NR FR1 Scenarios are supported NSA and SA Connectivity.
10. NFC was evaluated for phablet based on expected usage conditions.

4.9 SAR Test Considerations

The C2PC test of the DUT was performed by changing the pin to pin of the same performance part of the Sub5 antenna and changing the Hotspot power of the n77 band by changing the S/W.

The spot check is performed on the band with the change of the sub5 antenna, and the full test is performed on the band where the result is higher than the original model [Report no: HCT-SR-2505-FC008-R2]. Please refer to the technical documentation for detailed C2PC changes

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 $\leq 0.5\text{dB}$ higher than the same configuration in QPSK and the reported SAR for QPSK configuration is $\leq 1.45\text{ W/Kg}$, per section 5.2.4 for FCC KDB941225 D05v02r05.

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

LTE capabilities with overlapping transmission frequency ranges were applied to LTE Band 4 (1 712.4 MHz ~ 1 752.6MHz) is covered by LTE Band 66(1 712.5 MHz ~ 1 777.5 MHz), LTE Band 2(1 850.7 MHz ~ 1 909.3MHz) is covered by LTE Band 25(1 850.7 MHz ~ 1 914.3MHz) of this model each both LTE bands have the same target powers.

NR capabilities with overlapping transmission frequency ranges were applied to n2(1 852.5 MHz ~ 1 907.5MHz) is covered by n25(1 852.5 MHz ~ 1 912.5MHz) of this model each both NR bands have the same target powers.

This device uses two transmit pathways for n41 operations (Path 1 and Path 2). For each exposure condition, the pathway with the highest target power was fully evaluated. The worst case for each antenna and exposure condition was additionally evaluated using the other path.

5. Introduction

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

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

SAR Definition

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

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

Figure 1. SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg)

Where:

- = conductivity of the tissue-simulant material (S/m)
- = mass density of the tissue-simulant material (kg/m^3)
- = Total RMS electric field strength (V/m)

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

6. Description of test equipment

6.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY5 & DASY6 & DASY8 automated dosimetric assessment system. It is made by Schmid& Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF) (see Figure.2).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 or Window 10 or Window 11 is working with SAR Measurement system DASY5 & DASY6 & DASY8 A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

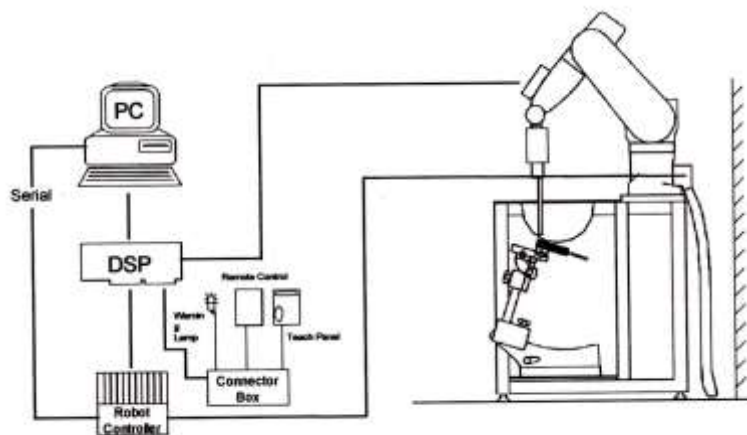


Figure 2. HCT SAR Lab. Test Measurement Set-up

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

7. SAR Measurement Procedure

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

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 table 4-1 & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
 - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
 - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

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

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

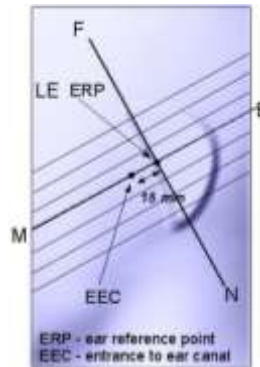


Figure 8-1
Close-up side view of ERP

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

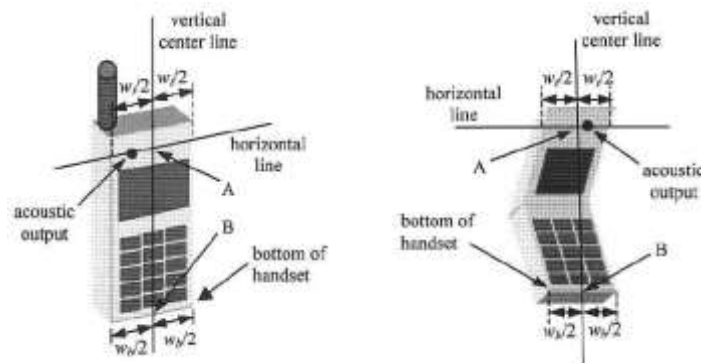


Figure 8-3. Handset vertical and horizontal reference lines

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.

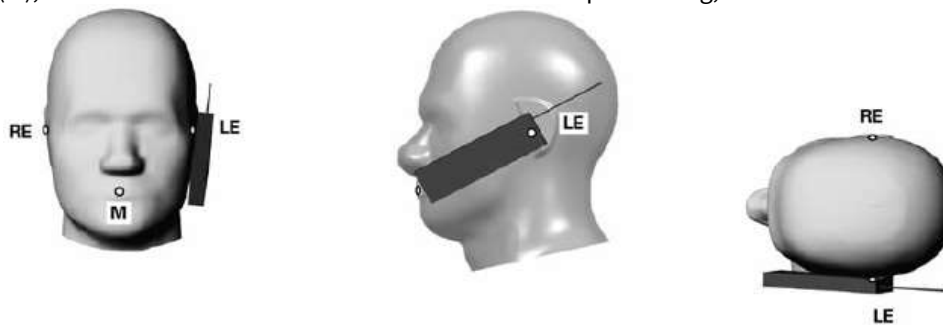


Figure 8.4 Touch/ Touch position of the wireless device

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.

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 SAR Measurement Conditions for UMTS

10.2.1 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, DPDCH and spreading codes, HS-DPCCH etc.) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

10.2.2 Body SAR measurements

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

10.2.3 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.

10.2.4 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.

10.2.5 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.



10.3 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).

10.3.1 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.

10.3.2 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.

10.3.3 A-MPR

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

10.3.4 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.

10.3.5 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.

10.3.6 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

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

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

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

10.3.7 The Call Box Setup for LTE(TDD)

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

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

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 Phone-1
<Fundamental Measurement> Output Main Continuous W-CDMA LTE

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

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

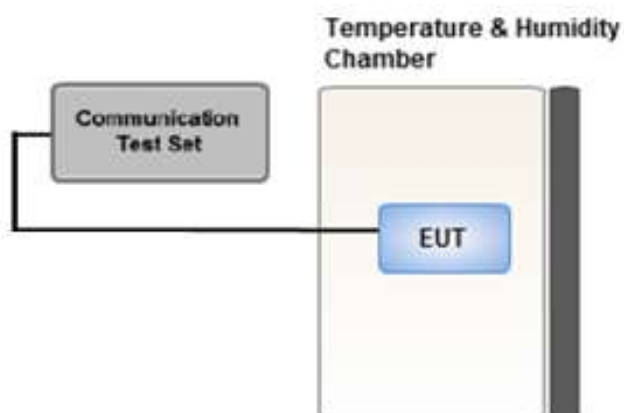
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base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

11.1.1 LTE FDD Band 25 Reduced Conducted Output Power

LTE FDD Band 25 Conducted Power _ Measured RSI = 0,2,3,4 _ Antenna I

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	18.29	18.47	18.52	0	0
		1	49	18.35	18.48	18.63	0	0
		1	99	18.40	18.34	18.46	0	0
		50	0	18.33	18.49	18.49	0-1	0
		50	25	18.27	18.47	18.59	0-1	0
		50	49	18.31	18.42	18.46	0-1	0
		100	0	18.27	18.47	18.46	0-1	0
	16QAM	1	0	18.58	18.78	18.79	0-1	0
		1	49	18.72	18.72	18.84	0-1	0
		1	99	18.62	18.58	18.64	0-1	0
		50	0	18.30	18.48	18.46	0-2	0
		50	25	18.27	18.41	18.41	0-2	0
		50	49	18.34	18.42	18.49	0-2	0
		100	0	18.29	18.44	18.44	0-2	0
	64QAM	1	0	18.48	18.63	18.72	0-2	0
		1	49	18.34	18.40	18.46	0-2	0
		1	99	18.60	18.57	18.54	0-2	0
		50	0	18.33	18.45	18.42	0-3	0
		50	25	18.30	18.40	18.45	0-3	0
		50	49	18.38	18.42	18.50	0-3	0
		100	0	18.29	18.44	18.37	0-3	0
	256QAM	1	0	18.47	18.57	18.62	0-5	0
		1	49	18.51	18.72	18.72	0-5	0
		1	99	18.60	18.35	18.47	0-5	0
		50	0	18.33	18.49	18.49	0-5	0
		50	25	18.29	18.43	18.42	0-5	0
		50	49	18.38	18.46	18.44	0-5	0
		100	0	18.33	18.49	18.46	0-5	0

LTE FDD Band 25 _ 15 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 MHz	26365 Ch. 1882.5 MHz	26615 Ch. 1907.5 MHz		
15 MHz	QPSK	1	0	18.29	18.46	18.42	0	0
		1	36	18.29	18.45	18.47	0	0
		1	74	18.29	18.36	18.41	0	0
		36	0	18.33	18.45	18.44	0-1	0
		36	18	18.29	18.42	18.43	0-1	0
		36	39	18.33	18.43	18.41	0-1	0
		75	0	18.30	18.43	18.40	0-1	0
	16QAM	1	0	18.58	18.72	18.62	0-1	0
		1	36	18.65	18.71	18.76	0-1	0
		1	74	18.47	18.66	18.69	0-1	0
		36	0	18.30	18.46	18.37	0-2	0
		36	18	18.29	18.42	18.42	0-2	0
		36	39	18.32	18.39	18.36	0-2	0
		75	0	18.26	18.39	18.39	0-2	0
	64QAM	1	0	18.49	18.60	18.61	0-2	0
		1	36	18.48	18.67	18.58	0-2	0
		1	74	18.48	18.54	18.54	0-2	0
		36	0	18.32	18.48	18.40	0-3	0
		36	18	18.29	18.41	18.35	0-3	0
		36	39	18.34	18.42	18.49	0-3	0
		75	0	18.30	18.39	18.30	0-3	0
	256QAM	1	0	18.41	18.55	18.50	0-5	0
		1	36	18.56	18.66	18.59	0-5	0
		1	74	18.42	18.40	18.54	0-5	0
		36	0	18.36	18.49	18.38	0-5	0
		36	18	18.40	18.47	18.40	0-5	0
		36	39	18.36	18.41	18.50	0-5	0
		75	0	18.36	18.41	18.45	0-5	0

LTE FDD Band 25 _ 10 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	18.46	18.49	18.46	0	0
		1	24	18.39	18.46	18.49	0	0
		1	49	18.32	18.43	18.49	0	0
		25	0	18.33	18.48	18.41	0-1	0
		25	12	18.38	18.47	18.53	0-1	0
		25	24	18.36	18.46	18.45	0-1	0
		50	0	18.40	18.46	18.54	0-1	0
	16QAM	1	0	18.57	18.64	18.71	0-1	0
		1	24	18.74	18.75	18.85	0-1	0
		1	49	18.55	18.60	18.61	0-1	0
		25	0	18.34	18.46	18.38	0-2	0
		25	12	18.34	18.42	18.50	0-2	0
		25	24	18.37	18.46	18.39	0-2	0
		50	0	18.34	18.41	18.50	0-2	0
	64QAM	1	0	18.43	18.65	18.50	0-2	0
		1	24	18.20	18.24	18.28	0-2	0
		1	49	18.50	18.59	18.62	0-2	0
		25	0	18.36	18.40	18.37	0-3	0
		25	12	18.31	18.41	18.43	0-3	0
		25	24	18.35	18.41	18.47	0-3	0
		50	0	18.38	18.44	18.49	0-3	0
	256QAM	1	0	18.53	18.56	18.50	0-5	0
		1	24	18.61	18.76	18.83	0-5	0
		1	49	18.43	18.44	18.48	0-5	0
		25	0	18.38	18.50	18.46	0-5	0
		25	12	18.39	18.46	18.49	0-5	0
		25	24	18.38	18.40	18.47	0-5	0
		50	0	18.38	18.46	18.44	0-5	0

LTE FDD Band 25 _ 5 Mhz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 Mhz	26365 Ch. 1882.5 Mhz	26665 Ch. 1912.5 Mhz		
5 Mhz	QPSK	1	0	18.40	18.44	18.43	0	0
		1	12	18.42	18.51	18.46	0	0
		1	24	18.37	18.38	18.41	0	0
		12	0	18.39	18.48	18.47	0-1	0
		12	6	18.36	18.44	18.50	0-1	0
		12	11	18.39	18.46	18.46	0-1	0
		25	0	18.38	18.48	18.52	0-1	0
	16QAM	1	0	18.67	18.74	18.71	0-1	0
		1	12	18.77	18.84	18.79	0-1	0
		1	24	18.69	18.76	18.74	0-1	0
		12	0	18.43	18.48	18.52	0-2	0
		12	6	18.37	18.48	18.43	0-2	0
		12	11	18.43	18.47	18.48	0-2	0
		25	0	18.37	18.45	18.43	0-2	0
	64QAM	1	0	18.57	18.64	18.67	0-2	0
		1	12	18.60	18.70	18.74	0-2	0
		1	24	18.53	18.60	18.56	0-2	0
		12	0	18.40	18.47	18.53	0-3	0
		12	6	18.36	18.44	18.43	0-3	0
		12	11	18.36	18.42	18.48	0-3	0
		25	0	18.37	18.44	18.39	0-3	0
	256QAM	1	0	18.43	18.52	18.51	0-5	0
		1	12	18.59	18.72	18.80	0-5	0
		1	24	18.51	18.52	18.50	0-5	0
		12	0	18.34	18.44	18.42	0-5	0
		12	6	18.35	18.44	18.46	0-5	0
		12	11	18.37	18.36	18.44	0-5	0
		25	0	18.37	18.46	18.42	0-5	0

LTE FDD Band 25 _ 3 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675 Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	18.38	18.43	18.35	0	0
		1	7	18.47	18.50	18.49	0	0
		1	14	18.34	18.38	18.44	0	0
		8	0	18.43	18.49	18.51	0-1	0
		8	3	18.37	18.47	18.50	0-1	0
		8	7	18.35	18.37	18.42	0-1	0
		15	0	18.43	18.49	18.52	0-1	0
	16QAM	1	0	18.69	18.75	18.60	0-1	0
		1	7	18.71	18.79	18.83	0-1	0
		1	14	18.63	18.65	18.73	0-1	0
		8	0	18.40	18.49	18.50	0-2	0
		8	3	18.44	18.54	18.47	0-2	0
		8	7	18.44	18.43	18.56	0-2	0
		15	0	18.41	18.43	18.43	0-2	0
	64QAM	1	0	18.61	18.53	18.59	0-2	0
		1	7	18.63	18.72	18.69	0-2	0
		1	14	18.54	18.58	18.63	0-2	0
		8	0	18.39	18.43	18.48	0-3	0
		8	3	18.34	18.48	18.42	0-3	0
		8	7	18.35	18.42	18.43	0-3	0
		15	0	18.38	18.43	18.50	0-3	0
	256QAM	1	0	18.48	18.52	18.48	0-5	0
		1	7	18.56	18.64	18.68	0-5	0
		1	14	18.45	18.50	18.61	0-5	0
		8	0	18.44	18.50	18.49	0-5	0
		8	3	18.40	18.46	18.48	0-5	0
		8	7	18.36	18.42	18.46	0-5	0
		15	0	18.39	18.47	18.47	0-5	0

LTE FDD Band 25 _ 1.4 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	18.40	18.48	18.48	0	0
		1	3	18.38	18.40	18.36	0	0
		1	5	18.37	18.37	18.42	0	0
		3	0	18.45	18.48	18.51	0	0
		3	1	18.32	18.30	18.27	0	0
		3	3	18.41	18.37	18.38	0	0
	16QAM	6	0	18.48	18.47	18.54	0-1	0
		1	0	18.62	18.65	18.80	0-1	0
		1	3	18.60	18.69	18.56	0-1	0
		1	5	18.66	18.70	18.58	0-1	0
		3	0	18.43	18.59	18.49	0-1	0
		3	1	18.45	18.50	18.53	0-1	0
	64QAM	3	3	18.31	18.40	18.44	0-1	0
		6	0	18.45	18.43	18.48	0-2	0
		1	0	18.27	18.59	18.58	0-2	0
		1	3	18.46	18.47	18.54	0-2	0
		1	5	18.49	18.56	18.54	0-2	0
		3	0	18.49	18.49	18.41	0-2	0
	256QAM	3	1	18.45	18.42	18.51	0-2	0
		3	3	18.36	18.42	18.43	0-2	0
		6	0	18.39	18.46	18.51	0-3	0
		1	0	18.51	18.50	18.52	0-5	0
		1	3	18.42	18.47	18.52	0-5	0
		1	5	18.45	18.40	18.50	0-5	0
	256QAM	3	0	18.40	18.44	18.46	0-5	0
		3	1	18.43	18.46	18.52	0-5	0
		3	3	18.42	18.47	18.51	0-5	0
		6	0	18.32	18.46	18.39	0-5	0

11.1.2 LTE FDD Band 25 Reduced Conducted Output Power

LTE FDD Band 25 Conducted Power _ Measured RSI = 1 _ Antenna I

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	16.75	16.95	16.82	0	0
		1	49	16.88	16.99	17.04	0	0
		1	99	16.95	16.89	16.79	0	0
		50	0	16.82	16.96	16.75	0-1	0
		50	25	16.78	16.92	17.03	0-1	0
		50	49	16.82	16.95	16.78	0-1	0
		100	0	16.81	16.95	16.72	0-1	0
	16QAM	1	0	17.09	17.22	16.98	0-1	0
		1	49	17.15	17.26	17.08	0-1	0
		1	99	17.15	17.13	16.93	0-1	0
		50	0	16.83	16.95	16.75	0-2	0
		50	25	16.77	16.91	16.69	0-2	0
		50	49	16.81	16.94	16.73	0-2	0
		100	0	16.73	16.93	16.71	0-2	0
	64QAM	1	0	16.98	17.08	16.98	0-2	0
		1	49	16.89	16.98	16.78	0-2	0
		1	99	17.13	17.01	16.91	0-2	0
		50	0	16.78	16.96	16.71	0-3	0
		50	25	16.79	16.87	16.68	0-3	0
		50	49	16.80	16.92	16.77	0-3	0
		100	0	16.80	16.92	16.69	0-3	0
	256QAM	1	0	16.91	17.09	16.98	0-5	0
		1	49	16.84	17.02	16.79	0-5	0
		1	99	17.08	16.96	16.85	0-5	0
		50	0	16.83	16.97	16.75	0-5	0
		50	25	16.80	16.95	16.74	0-5	0
		50	49	16.85	16.90	16.79	0-5	0
		100	0	16.82	16.97	16.72	0-5	0

LTE FDD Band 25 _ 15 Mhz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26115 Ch. 1857.5 Mhz	26365 Ch. 1882.5 Mhz	26615 Ch. 1907.5 Mhz		
15 Mhz	QPSK	1	0	16.84	16.98	16.73	0	0
		1	36	16.81	16.90	16.67	0	0
		1	74	16.89	16.89	16.73	0	0
		36	0	16.88	16.99	16.71	0-1	0
		36	18	16.86	16.95	16.70	0-1	0
		36	39	16.87	16.95	16.77	0-1	0
		75	0	16.84	16.96	16.71	0-1	0
	16QAM	1	0	17.09	17.24	16.95	0-1	0
		1	36	17.09	17.11	16.95	0-1	0
		1	74	17.09	17.10	17.02	0-1	0
		36	0	16.82	16.94	16.69	0-2	0
		36	18	16.82	16.93	16.68	0-2	0
		36	39	16.80	16.93	16.76	0-2	0
		75	0	16.79	16.89	16.67	0-2	0
	64QAM	1	0	17.01	17.11	16.91	0-2	0
		1	36	16.93	17.03	16.88	0-2	0
		1	74	16.96	16.95	16.89	0-2	0
		36	0	16.86	16.94	16.70	0-3	0
		36	18	16.84	16.92	16.70	0-3	0
		36	39	16.87	16.91	16.76	0-3	0
		75	0	16.79	16.89	16.67	0-3	0
	256QAM	1	0	16.96	17.01	16.87	0-5	0
		1	36	16.89	16.96	16.84	0-5	0
		1	74	16.97	17.01	16.83	0-5	0
		36	0	16.85	16.98	16.71	0-5	0
		36	18	16.89	16.96	16.72	0-5	0
		36	39	16.88	16.93	16.78	0-5	0
		75	0	16.86	16.95	16.74	0-5	0

LTE FDD Band 25 _ 10 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26090 Ch. 1855 MHz	26365 Ch. 1882.5 MHz	26640 Ch. 1910 MHz		
10 MHz	QPSK	1	0	16.83	16.94	16.67	0	0
		1	24	16.94	17.01	16.86	0	0
		1	49	16.79	16.95	16.73	0	0
		25	0	16.82	16.98	16.75	0-1	0
		25	12	16.82	16.95	16.76	0-1	0
		25	24	16.84	16.93	16.75	0-1	0
		50	0	16.82	16.92	16.78	0-1	0
	16QAM	1	0	17.07	17.11	16.82	0-1	0
		1	24	17.23	17.27	17.04	0-1	0
		1	49	17.07	17.16	16.95	0-1	0
		25	0	16.78	16.94	16.72	0-2	0
		25	12	16.83	16.89	16.75	0-2	0
		25	24	16.83	16.91	16.68	0-2	0
		50	0	16.84	16.90	16.73	0-2	0
	64QAM	1	0	16.95	17.05	16.76	0-2	0
		1	24	16.81	16.97	16.77	0-2	0
		1	49	17.00	17.04	16.85	0-2	0
		25	0	16.77	16.91	16.66	0-3	0
		25	12	16.78	16.88	16.76	0-3	0
		25	24	16.78	16.87	16.71	0-3	0
		50	0	16.81	16.91	16.77	0-3	0
	256QAM	1	0	16.92	17.09	16.78	0-5	0
		1	24	17.07	17.07	16.97	0-5	0
		1	49	16.91	16.98	16.79	0-5	0
		25	0	16.85	16.96	16.72	0-5	0
		25	12	16.89	16.93	16.79	0-5	0
		25	24	16.82	16.89	16.72	0-5	0
		50	0	16.85	16.93	16.79	0-5	0

LTE FDD Band 25 _ 5 Mhz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26065 Ch. 1852.5 Mhz	26365 Ch. 1882.5 Mhz	26665 Ch. 1912.5 Mhz		
5 Mhz	QPSK	1	0	16.81	16.91	16.79	0	0
		1	12	16.77	16.90	16.72	0	0
		1	24	16.83	16.88	16.72	0	0
		12	0	16.86	16.94	16.72	0-1	0
		12	6	16.79	16.88	16.70	0-1	0
		12	11	16.82	16.90	16.70	0-1	0
		25	0	16.83	16.96	16.78	0-1	0
	16QAM	1	0	17.08	17.17	17.00	0-1	0
		1	12	17.15	17.23	16.94	0-1	0
		1	24	17.10	17.16	16.97	0-1	0
		12	0	16.86	16.93	16.74	0-2	0
		12	6	16.81	16.94	16.74	0-2	0
		12	11	16.82	16.89	16.74	0-2	0
		25	0	16.82	16.90	16.72	0-2	0
	64QAM	1	0	17.00	17.08	16.91	0-2	0
		1	12	16.96	17.07	16.84	0-2	0
		1	24	16.89	17.00	16.82	0-2	0
		12	0	16.80	16.90	16.76	0-3	0
		12	6	16.80	16.88	16.71	0-3	0
		12	11	16.82	16.88	16.67	0-3	0
		25	0	16.80	16.91	16.70	0-3	0
	256QAM	1	0	16.91	16.99	16.85	0-5	0
		1	12	16.91	17.07	16.82	0-5	0
		1	24	16.94	17.01	16.68	0-5	0
		12	0	16.87	16.92	16.74	0-5	0
		12	6	16.81	16.95	16.74	0-5	0
		12	11	16.82	16.86	16.70	0-5	0
		25	0	16.80	16.91	16.77	0-5	0

LTE FDD Band 25 _ 3 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26055 Ch. 1851.5 MHz	26365 Ch. 1882.5 MHz	26675 Ch. 1913.5 MHz		
3 MHz	QPSK	1	0	16.72	16.83	16.64	0	0
		1	7	16.72	16.86	16.63	0	0
		1	14	16.74	16.83	16.64	0	0
		8	0	16.78	16.93	16.71	0-1	0
		8	3	16.79	16.91	16.73	0-1	0
		8	7	16.75	16.86	16.70	0-1	0
		15	0	16.82	16.93	16.73	0-1	0
	16QAM	1	0	17.13	17.15	16.96	0-1	0
		1	7	17.00	17.14	16.88	0-1	0
		1	14	17.02	17.16	16.94	0-1	0
		8	0	16.86	16.94	16.71	0-2	0
		8	3	16.80	16.91	16.72	0-2	0
		8	7	16.86	16.92	16.80	0-2	0
		15	0	16.80	16.90	16.74	0-2	0
	64QAM	1	0	16.92	17.03	16.83	0-2	0
		1	7	16.79	17.01	16.84	0-2	0
		1	14	17.02	17.06	16.88	0-2	0
		8	0	16.77	16.88	16.70	0-3	0
		8	3	16.81	16.91	16.71	0-3	0
		8	7	16.77	16.85	16.68	0-3	0
		15	0	16.79	16.89	16.69	0-3	0
	256QAM	1	0	16.87	16.99	16.76	0-5	0
		1	7	16.91	17.06	16.85	0-5	0
		1	14	16.85	16.95	16.78	0-5	0
		8	0	16.84	16.91	16.76	0-5	0
		8	3	16.81	16.87	16.71	0-5	0
		8	7	16.83	16.87	16.72	0-5	0
		15	0	16.74	16.84	16.64	0-5	0

LTE FDD Band 25 _ 1.4 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26047 Ch. 1850.7 MHz	26365 Ch. 1882.5 MHz	26683 Ch. 1914.3 MHz		
1.4 MHz	QPSK	1	0	16.77	16.86	16.70	0	0
		1	3	16.76	16.86	16.63	0	0
		1	5	16.77	16.81	16.63	0	0
		3	0	16.83	16.86	16.70	0	0
		3	1	16.73	16.77	16.61	0	0
		3	3	16.75	16.85	16.65	0	0
	16QAM	6	0	16.85	16.96	16.71	0-1	0
		1	0	17.11	17.12	17.00	0-1	0
		1	3	17.02	17.01	16.89	0-1	0
		1	5	17.09	17.09	16.93	0-1	0
		3	0	16.87	16.91	16.67	0-1	0
		3	1	16.81	16.90	16.75	0-1	0
	64QAM	3	3	16.77	16.89	16.71	0-1	0
		6	0	16.84	16.89	16.73	0-2	0
		1	0	16.43	17.06	16.83	0-2	0
		1	3	16.92	16.98	16.70	0-2	0
		1	5	16.92	16.97	16.80	0-2	0
		3	0	16.80	16.91	16.69	0-2	0
	256QAM	3	1	16.82	16.82	16.63	0-2	0
		3	3	16.78	16.84	16.66	0-2	0
		6	0	16.86	16.88	16.70	0-3	0
		1	0	16.44	16.93	16.73	0-5	0
		1	3	16.91	16.88	16.63	0-5	0
		1	5	16.90	16.93	16.81	0-5	0
		3	0	16.94	16.96	16.75	0-5	0
		3	1	16.85	16.87	16.78	0-5	0
		3	3	16.85	16.91	16.77	0-5	0
		6	0	16.84	16.81	16.64	0-5	0

11.1.3 LTE FDD Band 66 Reduced Conducted Output Power

LTE FDD Band 66 Conducted Power _ Measured RSI = 1 _ Antenna I

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	17.61	17.19	17.89	0	0
		1	49	17.48	17.24	18.05	0	0
		1	99	17.29	17.05	18.03	0	0
		50	0	17.51	17.21	17.91	0-1	0
		50	25	17.39	17.14	18.06	0-1	0
		50	49	17.32	17.15	18.05	0-1	0
		100	0	17.41	17.16	17.96	0-1	0
	16QAM	1	0	17.87	17.39	18.06	0-1	0
		1	49	17.84	17.52	18.31	0-1	0
		1	99	17.61	17.34	18.21	0-1	0
		50	0	17.49	17.17	17.89	0-2	0
		50	25	17.38	17.16	17.91	0-2	0
		50	49	17.30	17.12	18.04	0-2	0
		100	0	17.38	17.16	18.02	0-2	0
	64QAM	1	0	17.78	17.39	18.04	0-2	0
		1	49	17.52	17.24	18.04	0-2	0
		1	99	17.48	17.21	18.08	0-2	0
		50	0	17.49	17.16	17.89	0-3	0
		50	25	17.39	17.14	18.01	0-3	0
		50	49	17.32	17.11	18.02	0-3	0
		100	0	17.41	17.12	17.93	0-3	0
	256QAM	1	0	17.71	17.26	18.08	0-5	0
		1	49	17.45	17.26	18.01	0-5	0
		1	99	17.42	17.10	18.07	0-5	0
		50	0	17.49	17.22	17.97	0-5	0
		50	25	17.42	17.15	18.00	0-5	0
		50	49	17.33	17.16	18.00	0-5	0
		100	0	17.46	17.15	17.98	0-5	0

LTE FDD Band 66_ 15 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132047 Ch. 1717.5 MHz	132322 Ch. 1745 MHz	132597 Ch. 1772.5 MHz		
15 MHz	QPSK	1	0	17.57	17.18	17.90	0	0
		1	36	17.38	17.07	17.88	0	0
		1	74	17.34	17.08	17.90	0	0
		36	0	17.56	17.20	17.95	0-1	0
		36	18	17.43	17.17	17.96	0-1	0
		36	39	17.40	17.13	18.08	0-1	0
		75	0	17.49	17.13	17.95	0-1	0
	16QAM	1	0	17.87	17.43	18.12	0-1	0
		1	36	17.64	17.38	18.15	0-1	0
		1	74	17.66	17.36	18.18	0-1	0
		36	0	17.54	17.16	17.99	0-2	0
		36	18	17.44	17.12	17.97	0-2	0
		36	39	17.38	17.16	18.04	0-2	0
		75	0	17.43	17.08	17.98	0-2	0
	64QAM	1	0	17.71	17.34	18.04	0-2	0
		1	36	17.44	17.08	17.96	0-2	0
		1	74	17.49	17.27	18.14	0-2	0
		36	0	17.53	17.19	17.92	0-3	0
		36	18	17.44	17.13	18.00	0-3	0
		36	39	17.40	17.15	18.05	0-3	0
		75	0	17.42	17.12	17.94	0-3	0
	256QAM	1	0	17.74	17.26	18.02	0-5	0
		1	36	17.46	17.16	17.97	0-5	0
		1	74	17.42	17.17	17.98	0-5	0
		36	0	17.57	17.16	17.91	0-5	0
		36	18	17.48	17.17	17.97	0-5	0
		36	39	17.41	17.16	18.03	0-5	0
		75	0	17.43	17.13	17.99	0-5	0

LTE FDD Band 66_ 10 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132022 Ch. 1715 MHz	132322 Ch. 1745 MHz	132622 Ch. 1775 MHz		
10 MHz	QPSK	1	0	17.57	17.16	17.96	0	0
		1	24	17.60	17.22	18.14	0	0
		1	49	17.39	17.13	17.95	0	0
		25	0	17.57	17.17	17.93	0-1	0
		25	12	17.52	17.14	18.02	0-1	0
		25	24	17.46	17.12	18.07	0-1	0
		50	0	17.52	17.15	18.04	0-1	0
	16QAM	1	0	17.87	17.41	18.09	0-1	0
		1	24	17.87	17.55	18.34	0-1	0
		1	49	17.58	17.36	18.17	0-1	0
		25	0	17.56	17.14	17.90	0-2	0
		25	12	17.48	17.13	17.98	0-2	0
		25	24	17.44	17.11	18.03	0-2	0
		50	0	17.51	17.14	17.91	0-2	0
	64QAM	1	0	17.75	17.27	17.99	0-2	0
		1	24	17.59	17.22	18.10	0-2	0
		1	49	17.49	17.28	18.09	0-2	0
		25	0	17.54	17.14	17.99	0-3	0
		25	12	17.48	17.12	17.92	0-3	0
		25	24	17.43	17.10	18.00	0-3	0
		50	0	17.50	17.13	17.98	0-3	0
	256QAM	1	0	17.77	17.25	18.06	0-5	0
		1	24	17.52	17.14	18.12	0-5	0
		1	49	17.55	17.21	18.06	0-5	0
		25	0	17.61	17.15	17.94	0-5	0
		25	12	17.55	17.17	18.07	0-5	0
		25	24	17.52	17.15	17.97	0-5	0
		50	0	17.53	17.10	18.02	0-5	0

LTE FDD Band 66_5 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131997 Ch. 1712.5 MHz	132322 Ch. 1745 MHz	132647 Ch. 1777.5 MHz		
5 MHz	QPSK	1	0	17.60	17.11	18.00	0	0
		1	12	17.41	17.06	17.90	0	0
		1	24	17.45	17.08	17.95	0	0
		12	0	17.55	17.12	18.03	0-1	0
		12	6	17.57	17.09	17.91	0-1	0
		12	11	17.51	17.09	17.96	0-1	0
		25	0	17.54	17.14	17.93	0-1	0
	16QAM	1	0	17.87	17.47	18.19	0-1	0
		1	12	17.93	17.30	18.20	0-1	0
		1	24	17.71	17.42	18.27	0-1	0
		12	0	17.63	17.14	18.07	0-2	0
		12	6	17.66	17.21	18.06	0-2	0
		12	11	17.53	17.12	18.04	0-2	0
		25	0	17.58	17.14	18.00	0-2	0
	64QAM	1	0	17.73	17.25	18.22	0-2	0
		1	12	17.45	16.91	17.87	0-2	0
		1	24	17.68	17.30	18.10	0-2	0
		12	0	17.61	17.16	17.97	0-3	0
		12	6	17.56	17.11	17.93	0-3	0
		12	11	17.54	17.10	17.98	0-3	0
		25	0	17.57	17.05	17.95	0-3	0
	256QAM	1	0	17.70	17.21	18.06	0-5	0
		1	12	17.50	17.16	17.92	0-5	0
		1	24	17.61	17.23	18.11	0-5	0
		12	0	17.60	17.13	18.02	0-5	0
		12	6	17.60	17.14	18.02	0-5	0
		12	11	17.55	17.10	17.94	0-5	0
		25	0	17.59	17.13	17.99	0-5	0

LTE FDD Band 66_ 3 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131987 Ch. 1711.5 MHz	132322 Ch. 1745 MHz	132657 Ch. 1778.5 MHz		
3 MHz	QPSK	1	0	17.56	17.12	18.05	0	0
		1	7	17.39	17.10	17.85	0	0
		1	14	17.49	17.08	17.84	0	0
		8	0	17.57	17.13	17.91	0-1	0
		8	3	17.51	17.10	17.91	0-1	0
		8	7	17.54	17.14	17.98	0-1	0
		15	0	17.58	17.16	18.00	0-1	0
	16QAM	1	0	17.90	17.32	18.23	0-1	0
		1	7	17.89	17.38	18.25	0-1	0
		1	14	17.87	17.43	18.33	0-1	0
		8	0	17.67	17.15	17.99	0-2	0
		8	3	17.63	17.20	18.02	0-2	0
		8	7	17.63	17.20	18.05	0-2	0
		15	0	17.61	17.11	18.03	0-2	0
	64QAM	1	0	17.75	17.24	18.16	0-2	0
		1	7	17.49	17.02	17.88	0-2	0
		1	14	17.70	17.30	18.09	0-2	0
		8	0	17.57	17.09	17.95	0-3	0
		8	3	17.54	17.13	17.97	0-3	0
		8	7	17.57	17.11	17.91	0-3	0
		15	0	17.63	17.17	18.03	0-3	0
	256QAM	1	0	17.68	17.16	18.02	0-5	0
		1	7	17.53	17.06	17.92	0-5	0
		1	14	17.67	17.17	18.03	0-5	0
		8	0	17.63	17.17	17.96	0-5	0
		8	3	17.56	17.10	17.99	0-5	0
		8	7	17.64	17.15	17.95	0-5	0
		15	0	17.57	17.07	17.91	0-5	0

LTE FDD Band 66_ 1.4 MHz Bandwidth Conducted Power_ Upper Antenna

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				131979 Ch. 1710.7 MHz	132322 Ch. 1745 MHz	132665 Ch. 1779.3 MHz		
1.4 MHz	QPSK	1	0	17.56	17.04	17.90	0	0
		1	3	17.47	16.98	17.83	0	0
		1	5	17.52	17.03	17.88	0	0
		3	0	17.48	17.07	17.92	0-1	0
		3	1	17.42	16.99	17.81	0-1	0
		3	3	17.54	17.02	17.94	0-1	0
		6	0	17.57	17.08	17.88	0-1	0
	16QAM	1	0	17.83	17.30	18.17	0-1	0
		1	3	17.84	17.26	18.18	0-1	0
		1	5	17.77	17.34	18.14	0-1	0
		3	0	17.62	17.12	17.92	0-2	0
		3	1	17.59	17.12	17.96	0-2	0
		3	3	17.62	17.16	17.88	0-2	0
		6	0	17.59	17.16	18.00	0-2	0
	64QAM	1	0	17.75	17.24	18.10	0-2	0
		1	3	17.61	17.22	18.11	0-2	0
		1	5	17.71	17.27	18.06	0-2	0
		3	0	17.58	17.06	17.91	0-3	0
		3	1	17.51	17.10	17.92	0-3	0
		3	3	17.58	17.10	17.93	0-3	0
		6	0	17.55	17.06	17.82	0-3	0
	256QAM	1	0	17.62	17.14	17.96	0-5	0
		1	3	17.60	17.10	17.95	0-5	0
		1	5	17.65	17.09	17.83	0-5	0
		3	0	17.65	17.15	18.00	0-5	0
		3	1	17.65	17.13	17.96	0-5	0
		3	3	17.63	17.11	17.96	0-5	0
		6	0	17.58	17.07	17.89	0-5	0

11.3 NR Reduced Output Power

NR TDD Band n77(PC2) Conducted Power_ RSI = 1, 2, 4 _ SUB2 [Ant F]

NR TDD Band n77_ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						647000	650600	654200	657800	661400	665000	
						3705 MHz	3759 MHz	3813 MHz	3867 MHz	3921 MHz	3975 MHz	
10 MHz	30	DFT-s	pi/2 BPSK	1	1	13.62	13.57	14.07	13.13	12.04	12.19	0
				1	12	13.69	13.71	14.22	12.83	12.01	12.07	0
				1	22	13.66	13.72	14.19	12.59	12.18	12.27	0
				12	0	13.59	13.40	14.06	12.92	12.17	12.02	0
				12	6	13.59	13.63	14.12	12.77	12.16	12.09	0
				12	12	13.61	13.67	14.10	12.65	12.05	12.21	0
			QPSK	24	0	13.63	13.60	14.10	12.92	12.17	12.11	0
				1	1	13.62	13.62	14.06	13.02	12.15	12.14	0
				1	12	13.66	13.65	14.15	12.74	12.15	12.08	0
				1	22	13.65	13.70	14.14	12.53	12.05	12.29	0
				12	0	13.62	13.60	14.08	12.92	12.16	12.09	0
				12	6	13.62	13.63	14.10	12.78	12.04	12.12	0
				12	12	13.63	13.86	14.12	12.85	12.13	12.22	0
				24	0	13.61	13.64	14.09	12.79	12.14	12.11	0
			16QAM	1	1	13.63	13.62	14.05	13.04	12.19	12.04	0
			64QAM	1	1	13.65	13.56	14.10	12.98	12.16	12.03	0
			256QAM	1	1	13.71	13.56	14.08	13.01	12.25	12.19	0
			CP QPSK	1	1	13.63	13.64	13.76	13.05	12.17	12.14	0

NR TDD Band n77_ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						647168	650700	654232	657766	661300	664832	
						3707.52 MHz	3760.5 MHz	3813.49 MHz	3866.5 MHz	3919.5 MHz	3972.48 MHz	
15 MHz	30	DFT-s	pi/2 BPSK	1	1	13.65	13.60	14.07	13.26	12.14	12.19	0
				1	18	13.63	13.63	14.08	12.83	12.04	12.03	0
				1	36	13.69	13.74	14.17	12.43	12.19	12.34	0
				18	0	13.65	13.63	14.09	13.07	12.25	12.19	0
				18	9	13.64	13.63	14.10	13.06	12.16	12.03	0
				18	18	13.65	13.67	14.14	13.14	12.22	12.15	0
			QPSK	36	0	13.62	13.17	14.11	12.85	12.13	12.04	0
				1	1	13.61	13.61	14.13	13.25	12.41	12.27	0
				1	18	13.59	13.62	14.04	12.82	12.12	12.03	0
				1	36	13.64	13.67	14.22	12.47	12.18	12.31	0
				18	0	13.64	13.63	14.08	12.60	12.24	12.34	0
				18	9	13.65	13.64	14.09	13.09	12.17	12.03	0
				18	18	13.65	13.69	14.14	12.64	12.13	12.17	0
				36	0	13.65	13.62	14.11	12.87	12.16	12.01	0
			16QAM	1	1	13.76	13.51	13.96	13.15	12.28	12.19	0
			64QAM	1	1	13.63	13.67	14.13	13.26	12.34	12.15	0
			256QAM	1	1	13.35	13.71	14.01	13.24	12.36	12.09	0
			CP QPSK	1	1	13.68	13.61	14.00	13.27	12.25	12.18	0

NR TDD Band n77_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						647334	650800	654266	657734	661200	664666	
						3710.01 MHz	3762 MHz	3813.99 MHz	3866.01 MHz	3918 MHz	3969.99 MHz	
20 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.67	13.62	14.22	13.40	12.18	12.26	0
				1	26	13.66	13.68	14.10	12.78	12.23	12.39	0
				1	49	13.67	13.77	14.16	12.34	12.31	12.22	0
				25	0	13.64	13.64	14.07	13.15	12.18	12.29	0
				25	13	13.73	13.65	14.12	12.83	12.14	12.14	0
				25	26	13.65	13.72	14.13	12.54	12.04	12.34	0
			QPSK	50	0	13.66	13.73	14.12	12.85	12.13	12.45	0
				1	1	13.70	13.68	14.06	13.38	12.18	12.24	0
				1	26	13.67	13.69	14.07	12.82	12.16	12.32	0
				1	49	13.82	14.00	14.17	12.33	12.16	12.31	0
				25	0	13.66	13.63	14.07	13.13	12.19	12.16	0
				25	13	13.63	13.67	14.08	12.83	12.24	12.20	0
				25	26	13.65	13.73	14.14	12.54	12.14	12.21	0
				50	0	13.65	13.67	14.20	12.83	12.14	12.19	0
			16QAM	1	1	13.70	13.74	14.05	13.34	12.09	12.14	0
			64QAM	1	1	13.71	13.65	14.14	13.52	12.32	12.46	0
			256QAM	1	1	13.70	13.38	13.78	13.44	12.33	12.33	0
		CP	QPSK	1	1	13.69	13.65	14.07	13.44	12.14	12.15	0

NR TDD Band n77_ 25 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						647500	650900	654300	657700	661100	664500	
						3712.5 MHz	3763.5 MHz	3814.5 MHz	3865.5 MHz	3916.5 MHz	3967.5 MHz	
25 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.41	13.69	14.10	13.30	12.19	12.01	0
				1	32	13.38	13.76	14.16	12.68	12.38	12.55	0
				1	63	13.36	13.86	14.22	12.98	12.40	13.02	0
				32	0	13.40	13.66	14.09	12.97	12.39	12.25	0
				32	17	13.39	13.73	14.12	12.56	12.43	12.53	0
				32	33	13.38	13.75	14.17	12.72	12.44	12.78	0
			QPSK	64	0	13.39	13.79	14.12	12.59	12.42	12.50	0
				1	1	13.41	13.68	14.03	13.32	12.31	12.19	0
				1	32	13.41	13.67	14.15	12.61	12.45	12.52	0
				1	63	13.43	13.80	14.17	12.99	12.44	13.03	0
				32	0	13.41	13.66	14.08	12.95	12.40	12.24	0
				32	17	13.39	13.70	14.12	12.56	12.42	12.50	0
				32	33	13.39	13.76	14.16	12.91	12.45	12.79	0
				64	0	13.40	13.70	14.17	12.59	12.43	12.51	0
			16QAM	1	1	13.37	13.65	14.14	13.33	12.35	12.15	0
			64QAM	1	1	13.41	13.62	14.01	13.19	12.33	12.04	0
			256QAM	1	1	13.72	13.67	13.78	13.63	12.33	12.31	0
		CP	QPSK	1	1	13.74	13.66	14.08	13.59	12.30	12.30	0

NR TDD Band n77_30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						647668	651000	654334	657666	661000	664332	
						3715.02	3765	3815.01	3864.99	3915	3964.98	
30 MHz	30	DFT-s	pi/2 BPSK	1	1	13.58	13.52	13.81	13.74	12.14	12.12	0
				1	39	13.64	13.73	14.08	12.73	12.32	12.71	0
				1	76	13.76	13.92	14.29	12.90	12.28	13.21	0
				36	0	13.54	13.54	14.05	13.26	12.20	12.34	0
				36	21	13.61	13.64	14.11	12.72	12.31	12.64	0
				36	42	13.65	13.76	14.21	12.91	12.31	12.94	0
			QPSK	75	0	13.61	13.62	14.11	12.76	12.32	12.62	0
				1	1	13.59	13.49	13.96	13.70	12.10	12.12	0
				1	39	13.61	13.64	14.21	12.73	12.38	12.64	0
				1	76	13.70	13.86	14.35	12.86	12.30	13.18	0
				36	0	13.56	13.53	14.11	13.25	12.21	12.33	0
				36	21	13.58	13.64	14.24	12.71	12.30	12.63	0
				36	42	13.64	13.76	14.33	13.20	12.32	12.94	0
				75	0	13.59	13.64	14.14	12.75	12.30	12.63	0
			16QAM	1	1	13.54	13.42	13.96	13.74	12.07	12.10	0
			64QAM	1	1	13.57	13.36	14.09	13.72	12.11	12.27	0
			256QAM	1	1	13.52	13.55	13.92	13.95	12.09	12.17	0
		CP	QPSK	1	1	13.39	13.55	13.89	14.03	12.07	12.07	0

NR TDD Band n77_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						648000	651200	654400	657600	660800	664000	
						3720	3768	3816	3864	3912	3960	
40 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.44	13.31	13.85	14.17	12.42	12.08	0
				1	53	13.37	13.45	14.09	13.09	12.32	12.40	0
				1	104	13.37	13.68	14.19	12.95	12.22	13.19	0
				50	0	13.36	13.32	13.95	13.76	12.17	12.19	0
				50	28	13.37	13.43	14.05	13.04	12.28	12.33	0
				50	56	13.38	13.57	14.18	13.40	12.28	12.80	0
			QPSK	100	0	13.38	13.41	14.05	13.10	12.33	12.32	0
				1	1	13.38	13.29	13.89	14.12	12.48	12.08	0
				1	53	13.45	13.45	14.12	13.02	12.42	12.35	0
				1	104	13.30	13.67	14.22	13.94	12.26	13.14	0
				50	0	13.38	13.29	13.96	13.74	12.20	12.09	0
				50	28	13.38	13.43	14.07	13.05	12.28	12.36	0
				50	56	13.38	13.56	14.18	13.40	12.30	12.80	0
				100	0	13.37	13.43	14.05	13.11	12.28	12.31	0
			16QAM	1	1	13.21	13.09	14.06	14.19	12.44	12.09	0
			64QAM	1	1	13.22	13.11	13.97	14.40	12.53	12.12	0
			256QAM	1	1	13.80	13.52	13.89	14.18	12.11	12.19	0
		CP	QPSK	1	1	13.76	13.62	14.10	14.24	12.40	12.10	0

NR TDD Band n77_50 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						648334	652166	656000		659834	663666	
						3725.01	3782.49	3840		3897.51	3954.99	
50 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.59	13.67	14.23		12.40	12.25	0
				1	67	13.61	13.89	14.09		12.33	12.11	0
				1	131	13.69	14.05	13.12		12.34	12.23	0
				64	0	13.04	13.81	14.23		12.25	12.26	0
				64	35	13.67	13.90	14.13		12.35	12.27	0
				64	69	13.36	13.97	13.80		12.34	12.08	0
			QPSK	128	0	13.37	13.90	14.14		12.37	12.15	0
				1	1	13.33	13.73	14.21		12.45	12.19	0
				1	67	13.33	13.86	14.13		12.07	12.23	0
				1	131	13.34	14.04	13.15		12.43	12.25	0
				64	0	13.58	13.81	14.23		12.18	12.24	0
				64	35	13.63	13.91	14.13		12.36	12.17	0
				64	69	13.63	13.94	13.83		12.27	12.08	0
				128	0	13.36	13.91	14.14		12.14	12.26	0
			16QAM	1	1	13.54	13.67	14.46		12.57	12.15	0
			64QAM	1	1	13.36	13.59	14.12		12.41	12.06	0
			256QAM	1	1	13.70	13.80	14.22		12.40	12.14	0
		CP	QPSK	1	1	13.66	13.76	13.73		12.29	12.15	0

NR TDD Band n77_60 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						648668	653556			658444	663332	
						3730.02	3803.34			3876.66	3949.98	
60 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.47	13.95			12.03	12.05	0
				1	81	13.72	13.99			12.24	12.06	0
				1	160	13.68	14.25			12.07	12.35	0
				81	0	13.69	14.01			12.11	12.27	0
				81	41	13.68	13.99			12.21	12.04	0
				81	81	13.59	14.14			12.26	12.27	0
			QPSK	162	0	13.72	14.02			12.25	12.02	0
				1	1	13.85	14.01			12.08	12.19	0
				1	81	13.83	14.04			12.01	12.05	0
				1	160	13.72	14.28			12.35	12.16	0
				81	0	13.70	14.01			12.12	12.29	0
				81	41	13.69	14.01			12.22	12.04	0
				81	81	13.61	14.16			12.26	12.26	0
				162	0	13.72	14.03			12.26	12.05	0
			16QAM	1	1	13.60	14.22			12.18	12.04	0
			64QAM	1	1	13.76	13.88			12.31	12.16	0
			256QAM	1	1	13.81	13.96			12.07	12.04	0
		CP	QPSK	1	1	13.69	14.01			12.05	12.15	0

NR TDD Band n77_70 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						649000	654336			658334	663000	
						3735 MHz	3804.99 MHz			3875.01 MHz	3945 MHz	
70 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.71	14.04			12.17	12.19	0
				1	95	13.65	14.25			12.26	12.07	0
				1	187	13.98	14.22			12.06	12.35	0
				90	0	13.61	14.41			12.44	12.34	0
				90	50	13.58	14.06			12.29	12.07	0
				90	99	13.62	14.32			12.28	12.26	0
			QPSK	180	0	13.66	14.04			12.42	12.13	0
				1	1	13.68	14.07			12.13	12.23	0
				1	95	13.57	14.02			12.23	12.01	0
				1	187	13.95	14.18			12.19	12.26	0
				90	0	13.61	14.08			12.44	12.27	0
				90	50	13.59	14.06			12.29	12.09	0
				90	99	13.64	14.20			12.28	12.17	0
				180	0	13.66	14.08			12.20	12.13	0
			16QAM	1	1	13.75	14.07			12.14	12.38	0
			64QAM	1	1	13.66	14.06			12.11	12.26	0
			256QAM	1	1	13.66	14.08			12.21	12.19	0
		CP	QPSK	1	1	13.68	14.11			12.20	12.28	0

NR TDD Band n77_80 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						649334		656000		662666		
						3740.01 MHz		3840 MHz		3939.99 MHz		
80 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.92		13.46		12.05		0
				1	109	13.58		14.13		12.12		0
				1	215	14.03		13.38		12.19		0
				108	0	13.73		14.07		12.25		0
				108	55	13.61		14.13		12.21		0
				108	109	13.67		13.35		12.15		0
			QPSK	216	0	13.66		14.17		12.23		0
				1	1	13.81		14.16		12.18		0
				1	109	13.55		14.11		12.18		0
				1	215	13.99		14.32		12.33		0
				108	0	13.72		14.36		12.04		0
				108	55	13.61		14.14		12.12		0
				108	109	13.68		13.36		12.12		0
				216	0	13.67		14.18		12.19		0
			16QAM	1	1	13.81		14.28		12.17		0
			64QAM	1	1	13.82		14.23		12.17		0
			256QAM	1	1	13.53		13.76		12.25		0
		CP	QPSK	1	1	13.86		14.19		12.18		0

NR TDD Band n77_ 90 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						649668		656000		662332		
						3745.02 MHz		3840 MHz		3934.98 MHz		
90 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	13.77		14.21		12.12		0
				1	123	13.48		14.09		12.17		0
				1	243	14.16		14.25		12.19		0
				120	0	13.63		14.17		12.16		0
				120	63	13.45		14.14		12.13		0
				120	125	13.84		14.18		12.14		0
			QPSK	243	0	13.64		14.20		12.18		0
				1	1	13.90		14.24		12.19		0
				1	123	13.61		14.08		12.34		0
				1	243	14.36		14.16		12.30		0
				120	0	13.66		14.23		12.05		0
				120	63	13.56		14.12		12.23		0
				120	125	13.83		14.19		12.28		0
				243	0	13.64		14.19		12.28		0
			16QAM	1	1	13.88		14.29		12.19		0
			64QAM	1	1	13.78		14.28		12.13		0
			256QAM	1	1	13.82		14.23		12.12		0
		CP	QPSK	1	1	13.85		14.29		12.07		0

NR TDD Band n77_ 100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)						MPR [dB]
						650000				662000		
						3750 MHz				3930 MHz		
100 MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	14.11				12.08		0
				1	137	14.07				12.07		0
				1	271	14.29				12.13		0
				135	0	14.08				12.18		0
				135	69	14.07				12.11		0
				135	138	14.19				12.07		0
			QPSK	270	0	14.07				12.18		0
				1	1	14.34				12.29		0
				1	137	14.16				12.34		0
				1	271	14.23				12.17		0
				135	0	14.39				12.18		0
				135	69	14.38				12.14		0
				135	138	14.27				12.26		0
				270	0	14.18				12.17		0
			16QAM	1	1	14.17				12.24		0
			64QAM	1	1	14.25				12.29		0
			256QAM	1	1	14.07				12.33		0
		CP	QPSK	1	1	14.15				12.41		0

NR TDD Band n77 DoD(PC2) Conducted Power_ RSI = 2, 4 _ SUB2 [Ant F]

NR TDD Band n77 DoD_10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						630334	633334	636332	
						3445.01 MHz	3500.01 MHz	3544.98 MHz	
10 MHz	30	DFT-s	pi/2 BPSK	1	1	13.81	13.85	14.10	0
				1	12	13.86	13.92	14.25	0
				1	22	13.85	13.86	14.31	0
				12	0	13.77	13.84	14.16	0
				12	6	13.78	13.83	14.19	0
				12	12	13.79	13.83	14.22	0
				24	0	13.78	13.82	14.19	0
			QPSK	1	1	13.77	13.86	14.10	0
				1	12	13.79	13.81	14.21	0
				1	22	13.83	13.82	14.28	0
				12	0	13.77	13.85	14.15	0
				12	6	13.78	13.80	14.18	0
				12	12	13.80	13.82	14.25	0
				24	0	13.78	13.83	14.19	0
			16QAM	1	1	13.87	13.85	14.11	0
			64QAM	1	1	13.67	13.84	14.14	0
			256QAM	1	1	13.81	13.86	14.23	0
		CP	QPSK	1	1	13.78	13.86	13.84	0

NR TDD Band n77 DoD_15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						630500	633334	636166	
						3457.5 MHz	3500.01 MHz	3542.49 MHz	
15MHz	30	DFT-s	pi/2 BPSK	1	1	13.80	13.88	14.02	0
				1	18	13.82	13.79	14.07	0
				1	36	13.87	13.79	14.25	0
				18	0	13.86	13.86	14.04	0
				18	9	13.85	13.83	14.11	0
				18	18	13.86	13.83	14.17	0
				36	0	13.85	13.83	12.49	0
			QPSK	1	1	13.93	13.85	14.01	0
				1	18	13.84	13.78	14.08	0
				1	36	13.88	13.79	14.20	0
				18	0	13.85	13.83	13.04	0
				18	9	13.84	13.84	14.10	0
				18	18	13.85	13.82	14.16	0
				36	0	13.95	13.84	14.10	0
			16QAM	1	1	13.85	13.83	13.96	0
			64QAM	1	1	13.79	13.85	14.15	0
			256QAM	1	1	13.89	13.90	13.95	0
		CP	QPSK	1	1	13.86	13.88	13.95	0

NR TDD Band n77 DoD_20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						630668	633334	636000	
						3460.02 MHz	3500.01 MHz	3540 MHz	
20 MHz	30	DFT-s	pi/2 BPSK	1	1	14.02	13.86	13.86	0
				1	26	13.93	13.81	13.97	0
				1	49	13.89	13.81	14.19	0
				25	0	12.66	13.94	13.91	0
				25	13	13.93	13.84	14.18	0
				25	26	13.93	13.83	14.10	0
				50	0	13.92	13.85	13.99	0
			QPSK	1	1	13.94	13.89	13.88	0
				1	26	13.92	13.85	13.99	0
				1	49	13.90	13.81	14.21	0
				25	0	13.91	13.85	13.98	0
				25	13	13.92	13.84	14.00	0
				25	26	13.92	13.82	14.09	0
				50	0	13.92	13.83	13.99	0
			16QAM	1	1	13.87	13.88	13.85	0
			64QAM	1	1	13.83	13.97	13.90	0
			256QAM	1	1	14.00	13.90	13.50	0
		CP	QPSK	1	1	14.04	13.95	13.88	0

NR TDD Band n77 DoD_25 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						630834	633334	635834	
						3462.51 MHz	3500.01 MHz	3537.51 MHz	
25 MHz	30	DFT-s	pi/2 BPSK	1	1	14.00	13.94	13.76	0
				1	26	14.01	13.86	14.00	0
				1	49	14.00	13.84	14.15	0
				25	0	12.52	13.86	13.74	0
				25	13	13.98	13.83	13.88	0
				25	26	13.96	13.80	14.01	0
				50	0	13.99	13.82	13.86	0
			QPSK	1	1	13.94	13.87	13.73	0
				1	26	13.96	13.85	13.86	0
				1	49	13.91	13.82	14.15	0
				25	0	13.99	13.86	13.76	0
				25	13	13.99	13.82	13.87	0
				25	26	13.94	13.81	14.04	0
				50	0	13.97	13.86	13.88	0
			16QAM	1	1	14.01	13.89	13.74	0
			64QAM	1	1	13.96	13.83	13.77	0
			256QAM	1	1	13.96	13.89	13.76	0
		CP	QPSK	1	1	13.80	13.96	13.74	0

NR TDD Band n77 DoD_30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						631000	633334	635666	
						3465 MHz	3500.01 MHz	3534.99 MHz	
30 MHz	30	DFT-s	pi/2 BPSK	1	1	13.87	13.63	13.91	0
				1	39	13.89	13.89	13.98	0
				1	76	13.85	13.82	14.22	0
				36	0	13.79	13.64	13.94	0
				36	21	13.77	13.84	14.02	0
				36	42	13.77	13.80	14.14	0
				75	0	13.80	13.83	14.00	0
			QPSK	1	1	13.79	13.89	13.88	0
				1	39	13.81	13.84	14.00	0
				1	76	13.76	13.81	14.22	0
				36	0	13.78	13.89	13.69	0
				36	21	13.79	13.83	14.02	0
				36	42	13.78	13.81	14.16	0
				75	0	13.79	13.85	14.00	0
			16QAM	1	1	13.81	13.84	13.86	0
			64QAM	1	1	13.79	13.88	13.90	0
			256QAM	1	1	13.84	13.90	13.94	0
		CP	QPSK	1	1	13.86	13.91	13.94	0

NR TDD Band n77 DoD_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						631334		635332	
						3470.01 MHz		3529.98 MHz	
40 MHz	30	DFT-s	pi/2 BPSK	1	1	13.95		13.83	0
				1	53	13.87		13.88	0
				1	104	13.92		14.23	0
				50	0	13.88		13.03	0
				50	28	13.86		13.83	0
				50	56	13.84		14.01	0
				100	0	13.89		13.82	0
			QPSK	1	1	13.90		13.82	0
				1	53	13.89		13.97	0
				1	104	13.90		14.25	0
				50	0	13.89		13.77	0
				50	28	13.88		13.84	0
				50	56	13.82		14.02	0
				100	0	13.89		13.84	0
			16QAM	1	1	13.93		14.00	0
			64QAM	1	1	13.88		13.81	0
			256QAM	1	1	13.93		13.78	0
		CP	QPSK	1	1	14.06		13.77	0

NR TDD Band n77 DoD_50 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
						631668		635000	
						3475.02 MHz		3525 MHz	
50 MHz	30	DFT-s	pi/2 BPSK	1	1	13.61		13.29	0
				1	67	13.46		13.41	0
				1	131	13.58		13.93	0
				64	0	13.50		13.38	0
				64	35	13.43		13.40	0
				64	69	13.51		13.57	0
				128	0	13.48		13.40	0
			QPSK	1	1	13.54		13.52	0
				1	67	13.43		13.34	0
				1	131	13.53		13.88	0
				64	0	13.53		13.40	0
				64	35	13.45		13.40	0
				64	69	13.51		13.60	0
				128	0	13.48		13.42	0
			16QAM	1	1	13.47		13.39	0
			64QAM	1	1	13.35		13.50	0
			256QAM	1	1	13.79		13.44	0
		CP	QPSK	1	1	13.74		13.71	0

NR TDD Band n77 DoD_60 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 MHz		
60 MHz	30	DFT-s	pi/2 BPSK	1	1		13.98		0
				1	81		13.83		0
				1	160		13.92		0
				81	0		13.91		0
				81	41		13.83		0
				81	81		13.80		0
				162	0		13.88		0
			QPSK	1	1		13.99		0
				1	81		13.80		0
				1	160		13.91		0
				81	0		13.90		0
				81	41		13.85		0
				81	81		13.81		0
				162	0		13.87		0
			16QAM	1	1		14.04		0
			64QAM	1	1		14.01		0
			256QAM	1	1		13.96		0
		CP	QPSK	1	1		14.06		0

NR TDD Band n77 DoD_70 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)		MPR [dB]
							633334	
							3500.01 MHz	
70 MHz	30	DFT-s	pi/2 BPSK	1	1		12.44	0
				1	95		13.85	0
				1	187		14.04	0
				90	0		13.89	0
				90	50		13.83	0
				90	99		13.80	0
				180	0		13.89	0
			QPSK	1	1		14.04	0
				1	95		13.79	0
				1	187		13.98	0
				90	0		13.89	0
				90	50		13.85	0
				90	99		13.81	0
				180	0		13.88	0
			16QAM	1	1		14.01	0
			64QAM	1	1		14.10	0
			256QAM	1	1		14.05	0
		CP	QPSK	1	1		13.76	0

NR TDD Band n77 DoD_80 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)		MPR [dB]
							633334	
							3500.01 MHz	
80 MHz	30	DFT-s	pi/2 BPSK	1	1		12.61	0
				1	109		13.84	0
				1	215		14.18	0
				108	0		13.90	0
				108	55		13.85	0
				108	109		13.81	0
				216	0		13.91	0
			QPSK	1	1		14.09	0
				1	109		13.84	0
				1	215		14.15	0
				108	0		13.61	0
				108	55		13.55	0
				108	109		13.51	0
				216	0		13.61	0
			16QAM	1	1		13.88	0
			64QAM	1	1		13.82	0
			256QAM	1	1		14.15	0
		CP	QPSK	1	1		14.16	0

NR TDD Band n77 DoD_90 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 MHz		
90 MHz	30	DFT-s	pi/2 BPSK	1	1		13.93		0
				1	123		13.52		0
				1	243		14.01		0
				120	0		13.65		0
				120	63		13.55		0
				120	125		13.57		0
				243	0		13.64		0
			QPSK	1	1		13.92		0
				1	123		13.55		0
				1	243		14.05		0
				120	0		13.64		0
				120	63		13.55		0
				120	125		13.55		0
				243	0		13.62		0
			16QAM	1	1		14.01		0
			64QAM	1	1		13.88		0
			256QAM	1	1		14.17		0
		CP	QPSK	1	1		13.91		0

NR TDD Band n77 DoD_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							633334		
							3500.01 MHz		
100MHz	30	DFT-s	pi/2 BPSK	1	1		14.28		0
				1	137		13.82		0
				1	271		14.49		0
				135	0		13.97		0
				135	69		13.86		0
				135	138		13.88		0
				270	0		13.94		0
			QPSK	1	1		14.48		0
				1	137		13.87		0
				1	271		14.26		0
				135	0		13.97		0
				135	69		13.85		0
				135	138		13.89		0
				270	0		13.96		0
			16QAM	1	1		14.29		0
			64QAM	1	1		14.30		0
			256QAM	1	1		13.97		0
		CP	QPSK	1	1		14.28		0

11.3.1 NR Band SRS Conducted Power

[NR TDD Band n41 SRS Conducted Power_ Antenna B / MAIN2]

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna I/SUB5, SRS #1

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	13.85	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	13.96	0
RSI = 1	100 MHz	30	DFT-s QPSK	11.74	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna C/MAIN3, SRS #2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	23.20	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	20.90	0
RSI = 1	100 MHz	30	DFT-s QPSK	23.11	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna G/SUB3, SRS #3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	1726	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	15.71	0
RSI = 1	100 MHz	30	DFT-s QPSK	17.12	0

[NR TDD Band n41 SRS Conducted Power_ Antenna I / SUB5]

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna B/MAIN2, SRS #1

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	13.95	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	13.98	0
RSI = 1	100 MHz	30	DFT-s QPSK	11.95	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna G/SUB3, SRS #2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	23.17	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	18.42	0
RSI = 1	100 MHz	30	DFT-s QPSK	15.29	0

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna C/MAIN3, SRS #3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				518598	
				2 592.99 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	22.45	0
RSI = 0,2,3,4	100 MHz	30	DFT-s QPSK	17.94	0
RSI = 1	100 MHz	30	DFT-s QPSK	14.84	0

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.

◆ UMTS/ LTE / 5G NR SUB 6 Band

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
06/09/2025	20.2	1 800H	1 710	1.313	39.462	1.348	40.144	-2.60	-1.70
			1 750	1.357	39.312	1.371	40.080	-1.02	-1.92
			1 800	1.409	39.069	1.400	40.000	+0.64	-2.33
06/09/2025	21.9	1 800H	1 710	1.287	41.666	1.348	40.144	-4.53	+3.79
			1 750	1.309	41.688	1.371	40.080	-4.52	+4.01
			1 800	1.346	41.638	1.400	40.000	-3.86	+4.10
06/10/2025	20.6	1 900H	1 850	1.374	40.828	1.400	40.000	-1.86	+2.07
			1 900	1.399	40.679	1.400	40.000	-0.07	+1.70
			1 910	1.404	40.669	1.400	40.000	+0.29	+1.67
06/10/2025	22.2	1 900H	1 850	1.348	41.512	1.400	40.000	-3.71	+3.78
			1 900	1.374	41.385	1.400	40.000	-1.86	+3.46
			1 910	1.378	41.365	1.400	40.000	-1.57	+3.41
06/11/2025	20.0	2 600H	2 500	1.770	40.843	1.855	39.140	-4.58	+4.35
			2 600	1.893	40.719	1.964	39.010	-3.62	+4.38
			2 690	1.994	39.900	2.062	38.894	-3.30	+2.59
06/16/2025	22.5	2 600H	2 500	1.790	39.980	1.855	39.140	-3.50	+2.15
			2 600	1.897	39.585	1.964	39.010	-3.41	+1.47
			2 690	1.998	39.243	2.062	38.894	-3.10	+0.90
06/17/2025	22.3	2 600H	2 500	1.808	40.340	1.855	39.140	-2.53	+3.07
			2 600	1.916	39.945	1.964	39.010	-2.44	+2.40
			2 690	2.017	39.603	2.062	38.894	-2.18	+1.82
06/12/2025	22.4	3500H-3700H	3 500	2.900	38.069	2.913	37.930	-0.45	+0.37
			3 550	2.953	37.948	2.964	37.870	-0.37	+0.21
			3 650	3.048	37.765	3.066	37.760	-0.59	+0.01
			3 700	3.092	37.655	3.118	37.770	-0.83	-0.30
06/13/2025	22.2	3500H-3700H	3 500	2.900	38.071	2.913	37.930	-0.45	+0.37
			3 550	2.954	37.946	2.964	37.870	-0.34	+0.20
			3 650	3.047	37.765	3.066	37.760	-0.62	+0.01
			3 700	3.092	37.656	3.118	37.770	-0.83	-0.30

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
06/12/2025	22.4	3700H-3970	3 700	3.092	37.655	3.118	37.700	- 0.83	- 0.12
			3 750	3.143	37.601	3.169	37.640	- 0.82	- 0.10
			3 800	3.191	37.549	3.220	37.590	- 0.90	- 0.11
			3 900	3.281	37.424	3.233	37.470	+ 1.48	- 0.12
			3 970	3.354	37.340	3.394	37.390	- 1.18	- 0.13
06/13/2025	22.2	3700H-3970	3 700	3.092	37.656	3.118	37.700	- 0.83	- 0.12
			3 750	3.143	37.599	3.169	37.640	- 0.82	- 0.11
			3 800	3.191	37.549	3.220	37.590	- 0.90	- 0.11
			3 900	3.281	37.423	3.233	37.470	+ 1.48	- 0.13
			3 970	3.353	37.339	3.394	37.390	- 1.21	- 0.14

12.2 System Verification

◆ UMTS/ LTE Band / 5G NR SUB 6 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]	[%]	[%]
1 800	06/09/2025	7679	2d015	Head	20.3	20.2	38.10	1.980	39.60	+ 3.94	± 10
1 800	06/09/2025	7732		Head	22.0	21.9	38.10	1.800	36.00	- 5.51	± 10
1 900	06/10/2025	7679	5d061	Head	20.7	20.6	38.80	2.070	41.40	+ 6.70	± 10
1 900	06/10/2025	7732		Head	22.3	22.2	38.80	2.120	42.40	+ 9.28	± 10
2 600	06/11/2025	7679	1106	Head	20.1	20.0	55.70	2.680	53.60	- 3.77	± 10
2 600	06/16/2025	3076		Head	22.5	22.5	55.70	2.710	54.20	- 2.69	± 10
2 600	06/17/2025	3076		Head	22.3	22.3	55.70	2.730	54.60	- 1.97	± 10
3 500	06/12/2025	3903	1040	Head	22.5	22.4	65.20	3.37	67.40	+ 3.37	± 10
3 500	06/13/2025	3903		Head	22.3	22.2	65.20	3.36	67.20	+ 3.07	± 10
3 700	06/12/2025	3903	1105	Head	22.5	22.4	69.30	3.46	69.20	- 0.14	± 10
3 700	06/13/2025	3903		Head	22.3	22.2	69.30	3.28	65.60	- 5.34	± 10
3 900	06/12/2025	3903	1019	Head	22.5	22.4	70.30	3.29	65.80	- 6.40	± 10
3 900	06/13/2025	3903		Head	22.3	22.2	70.30	3.46	69.20	- 1.56	± 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.

13. SAR Test Data Summary

13.1 SAR Measurement Results

13.1.1 Head SAR Measurement Results

UMTS Band 4 Head SAR- Original							UMTS Band 4 Head SAR- C2PC							
Frequency		Mode	Ant.	Test Position	Duty Cycle	Scaled SAR (W/kg)	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.						(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 732.4	1412	RMC	I	Left Touch	1:1	0.314	18.5	17.78	0.06	0.231	1.180	0.273	-13.06	A1
1 732.4	1412	RMC	I	Left Tilt	1:1	0.079								
1 732.4	1412	RMC	I	Right Touch	1:1	0.064								
1 732.4	1412	RMC	I	Right Tilt	1:1	0.027								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram							

UMTS Band 2 Head SAR- Original							UMTS Band 2 Head SAR- C2PC							
Frequency		Mode	Ant.	Test Position	Duty Cycle	Scaled SAR (W/kg)	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.						(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 880	9400	RMC	I	Left Touch	1:1	0.289	18.0	16.93	-0.11	0.203	1.279	0.260	-10.03	A2
1 880	9400	RMC	I	Left Tilt	1:1	0.054								
1 880	9400	RMC	I	Right Touch	1:1	0.058								
1 880	9400	RMC	I	Right Tilt	1:1	0.035								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram							

LTE FDD Band 25 (PCS) Head SAR - C2PC

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)	
1 905	26590	QPSK	I	20	18.0	17.04	-0.18	Left Touch	0	1	49	1:1	0.290	1.247	0.362	A3
1 905	26590	QPSK	I	20	18.0	17.03	0.15	Left Touch	0	50	25	1:1	0.288	1.250	0.360	-
1 905	26590	QPSK	I	20	18.0	17.04	0.19	Left Tilt	0	1	49	1:1	0.059	1.247	0.074	-
1 905	26590	QPSK	I	20	18.0	17.03	0.05	Left Tilt	0	50	25	1:1	0.061	1.250	0.076	-
1 905	26590	QPSK	I	20	18.0	17.04	0.14	Right Touch	0	1	49	1:1	0.066	1.247	0.082	-
1 905	26590	QPSK	I	20	18.0	17.03	0.00	Right Touch	0	50	25	1:1	0.066	1.250	0.083	-
1 905	26590	QPSK	I	20	18.0	17.04	0.11	Right Tilt	0	1	49	1:1	0.030	1.247	0.037	-
1 905	26590	QPSK	I	20	18.0	17.03	0.11	Right Tilt	0	50	25	1:1	0.028	1.250	0.035	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE Band 41 Head SAR- Original

LTE Band 41 Head SAR- C2PC

Frequency		Mode	Ant.	Band width	Test Position	MPR	RB Size	RB offset	Duty Cycle	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.			(MHz)		(dB)				(W/kg)	(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
2 506	39750	QPSK	I	20	Left Touch	0	1	0	1:1.58	0.180								
2 506	39750	QPSK	I	20	Left Touch	0	50	0	1:1.58	0.206								
2 506	39750	QPSK	I	20	Left Tilt	0	1	0	1:1.58	0.036								
2 506	39750	QPSK	I	20	Left Tilt	0	50	0	1:1.58	0.042								
2 506	39750	QPSK	I	20	Right Touch	0	1	0	1:1.58	0.040								
2 506	39750	QPSK	I	20	Right Touch	0	50	0	1:1.58	0.048								
2 506	39750	QPSK	I	20	Right Tilt	0	1	0	1:1.58	0.006								
2 506	39750	QPSK	I	20	Right Tilt	0	50	0	1:1.58	0.007								
Power Class 2 (HPUE)																		
2 506	39750	QPSK	I	20	Left Touch	0	1	0	1:2.31	0.235	19.4	19.35	0.19	0.226	1.012	0.229	-2.55	A4
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 66 (AWS) Head SAR C2PC

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)	
1 770	132572	QPSK	I	20	18.5	18.05	-0.13	Left Touch	0	1	49	1:1	0.260	1.109	0.288	A5
1 770	132572	QPSK	I	20	18.5	18.06	0.12	Left Touch	0	50	25	1:1	0.256	1.107	0.283	-
1 770	132572	QPSK	I	20	18.5	18.05	0.12	Left Tilt	0	1	49	1:1	0.057	1.109	0.063	-
1 770	132572	QPSK	I	20	18.5	18.06	0.11	Left Tilt	0	50	25	1:1	0.056	1.107	0.062	-
1 770	132572	QPSK	I	20	18.5	18.05	0.19	Right Touch	0	1	49	1:1	0.084	1.109	0.093	-
1 770	132572	QPSK	I	20	18.5	18.06	0.19	Right Touch	0	50	25	1:1	0.081	1.107	0.090	-
1 770	132572	QPSK	I	20	18.5	18.05	0.10	Right Tilt	0	1	49	1:1	0.031	1.109	0.034	-
1 770	132572	QPSK	I	20	18.5	18.06	0.18	Right Tilt	0	50	25	1:1	0.031	1.107	0.034	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

NR Band n25 Head SAR- Original

NR Band n25 Head SAR- C2PC

Frequency		OFDM Mode	Ant.	Band width	Test Position	MPR	RB Size	RB offset	Duty Cycle	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.			(MHz)		(dB)				(W/kg)	(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 882.5	376500	DFT-s QPSK	I	40	Left Touch	0	1	214	1:1	0.240								
1 882.5	376500	DFT-s QPSK	I	40	Left Touch	0	108	108	1:1	0.356	18.0	17.72	0.18	0.270	1.067	0.288	-19.10	A6
1 882.5	376500	DFT-s QPSK	I	40	Left Tilt	0	1	214	1:1	0.047								
1 882.5	376500	DFT-s QPSK	I	40	Left Tilt	0	108	108	1:1	0.048								
1 882.5	376500	DFT-s QPSK	I	40	Right Touch	0	1	214	1:1	0.061								
1 882.5	376500	DFT-s QPSK	I	40	Right Touch	0	108	108	1:1	0.064								
1 882.5	376500	DFT-s QPSK	I	40	Right Tilt	0	1	214	1:1	0.031								
1 882.5	376500	DFT-s QPSK	I	40	Right Tilt	0	108	108	1:1	0.032								
1 882.5	376500	CP QPSK	I	40	Left Touch	0	1	1	1:1	0.280								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram							

NR Band n41 Head SAR- Original											NR Band n41 Head SAR- C2PC							
Frequency		OFDM Mode	Ant.	Band width (MHz)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Scaled SAR (W/kg)	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
Mhz	Ch.										(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
2 592.99	518598	DFT-s QPSK	B	100	Left Touch	0	1	1	1:1	0.014								
2 592.99	518598	DFT-s QPSK	B	100	Left Touch	0	135	69	1:1	0.011								
2 592.99	518598	DFT-s QPSK	B	100	Left Tilt	0	1	1	1:1	0.008								
2 592.99	518598	DFT-s QPSK	B	100	Left Tilt	0	135	69	1:1	0.006								
2 592.99	518598	DFT-s QPSK	B	100	Right Touch	0	1	1	1:1	0.011								
2 592.99	518598	DFT-s QPSK	B	100	Right Touch	0	135	69	1:1	0.026								
2 592.99	518598	DFT-s QPSK	B	100	Right Tilt	0	1	1	1:1	0.003								
2 592.99	518598	DFT-s QPSK	B	100	Right Tilt	0	135	69	1:1	0.002								
2 592.99	518598	CP QPSK	B	100	Right Touch	0	1	1	1:1	0.014								
2 592.99	518598	DFT-s QPSK	I	100	Left Touch	0	1	1	1:1	0.703								
2 592.99	518598	DFT-s QPSK	I	100	Left Touch	0	135	138	1:1	0.758	15.8	15.78	-0.13	0.600	1.005	0.603	-20.45	A7
2 592.99	518598	DFT-s QPSK	I	100	Left Touch	0	270	0	1:1	0.714								
2 592.99	518598	DFT-s QPSK	I	100	Left Tilt	0	1	1	1:1	0.093								
2 592.99	518598	DFT-s QPSK	I	100	Left Tilt	0	135	138	1:1	0.135								
2 592.99	518598	DFT-s QPSK	I	100	Right Touch	0	1	1	1:1	0.170								
2 592.99	518598	DFT-s QPSK	I	100	Right Touch	0	135	138	1:1	0.161								
2 592.99	518598	DFT-s QPSK	I	100	Right Tilt	0	1	1	1:1	0.037								
2 592.99	518598	DFT-s QPSK	I	100	Right Tilt	0	135	138	1:1	0.034								
2 592.99	518598	CP QPSK	I	100	Left Touch	0	1	1	1:1	0.714								
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 SRS Ant Head SAR C2PC																
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.															
2 592.99	518598	DFT-s QPSK	SRS B	100	12.0	11.95	0.00	Left Touch	0	1	137	1:1	0.012	1.012	0.012	-
2 592.99	518598	DFT-s QPSK	SRS B	100	12.0	11.95	0.00	Left Tilt	0	1	137	1:1	0.005	1.012	0.005	-
2 592.99	518598	DFT-s QPSK	SRS B	100	12.0	11.95	0.17	Right Touch	0	1	137	1:1	0.013	1.012	0.013	-
2 592.99	518598	DFT-s QPSK	SRS B	100	12.0	11.95	0.00	Right Tilt	0	1	137	1:1	0.005	1.012	0.005	-
2 592.99	518598	DFT-s QPSK	SRS I	100	12.0	11.74	0.09	Left Touch	0	1	137	1:1	0.386	1.062	0.410	-
2 592.99	518598	DFT-s QPSK	SRS I	100	12.0	11.74	0.14	Left Tilt	0	1	137	1:1	0.076	1.062	0.081	-
2 592.99	518598	DFT-s QPSK	SRS I	100	12.0	11.74	0.12	Right Touch	0	1	137	1:1	0.073	1.062	0.078	-
2 592.99	518598	DFT-s QPSK	SRS I	100	12.0	11.74	0.19	Right Tilt	0	1	137	1:1	0.015	1.062	0.016	-
2 592.99	518598	DFT-s QPSK	SRS C	100	24.0	23.11	0.13	Left Touch	0	1	137	1:1	0.265	1.227	0.325	-
2 592.99	518598	DFT-s QPSK	SRS C	100	24.0	23.11	0.17	Left Tilt	0	1	137	1:1	0.053	1.227	0.065	-
2 592.99	518598	DFT-s QPSK	SRS C	100	24.0	23.11	0.14	Right Touch	0	1	137	1:1	0.165	1.227	0.202	-
2 592.99	518598	DFT-s QPSK	SRS C	100	24.0	23.11	0.18	Right Tilt	0	1	137	1:1	0.099	1.227	0.121	-
2 592.99	518598	DFT-s QPSK	SRS G	100	18.0	17.12	-0.17	Left Touch	0	1	137	1:1	0.229	1.253	0.281	-
2 592.99	518598	DFT-s QPSK	SRS G	100	18.0	17.12	0.15	Left Tilt	0	1	137	1:1	0.182	1.253	0.223	-
2 592.99	518598	DFT-s QPSK	SRS G	100	18.0	17.12	0.11	Right Touch	0	1	137	1:1	0.615	1.253	0.753	A8
2 592.99	518598	DFT-s QPSK	SRS G	100	18.0	17.12	0.13	Right Tilt	0	1	137	1:1	0.613	1.253	0.751	-
SAR Human Exposure Specific in Health Canada Safety Code 6 Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

NR Band n66 Head SAR- Original											NR Band n66 Head SAR- C2PC							
Frequency		OFDM Mode	Ant.	Band width (MHz)	Test Position	MPR	RB Size	RB offset	Duty Cycle	Scaled SAR (W/kg)	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.					(dB)					(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 745	349000	DFT-s QPSK	I	40	Left Touch	0	1	214	1:1	0.241	18.5	18.49	0.10	0.187	1.002	0.187	-22.41	A9
1 745	349000	DFT-s QPSK	I	40	Left Touch	0	108	108	1:1	0.239								
1 745	349000	DFT-s QPSK	I	40	Left Tilt	0	1	214	1:1	0.052								
1 745	349000	DFT-s QPSK	I	40	Left Tilt	0	108	108	1:1	0.053								
1 745	349000	DFT-s QPSK	I	40	Right Touch	0	1	214	1:1	0.079								
1 745	349000	DFT-s QPSK	I	40	Right Touch	0	108	108	1:1	0.079								
1 745	349000	DFT-s QPSK	I	40	Right Tilt	0	1	214	1:1	0.029								
1 745	349000	DFT-s QPSK	I	40	Right Tilt	0	108	108	1:1	0.029								
1 745	349000	DFT-s QPSK	I	40	Left Touch	0	1	1	1:1	0.244								
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/Hotspot SAR Measurement Results

UMTS Band 4 Body/Hotspot SAR- Original									UMTS Band 4 Body/Hotspot SAR - C2PC							
Frequency		Mode	Ant.	Form Factor	Test Position	Duty Cycle	Dist.	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.								(dB)	(dB)	(dB)	(W/kg)		(W/kg)	(%)	
1 732.4	1412	RMC	I	Open	Rear	1:1	5	0.415								
1 732.4	1412	RMC	I	Open	Front	1:1	5	0.290								-
1 732.4	1412	RMC	I	Open	Right	1:1	5	0.562	20.5	18.97	-0.15	0.328	1.422	0.466	-17.08	B1
1 732.4	1412	RMC	I	Open	Top	1:1	5	0.040								
1 732.4	1412	RMC	I	Close	Rear	1:1	5	0.037								
1 732.4	1412	RMC	I	Close	Front	1:1	5	0.102								
1 732.4	1412	RMC	I	Close	Right	1:1	5	0.311	20.5	18.97	0.03	0.201	1.422	0.286	-8.04	-
1 732.4	1412	RMC	I	Close	Top	1:1	5	0.004								
1 732.4	1412	RMC	I	Close	Bottom	1:1	5	0.009								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UMTS Band 2 Body/Hotspot SAR- Original									UMTS Band 2 Body/Hotspot SAR - C2PC							
Frequency		Mode	Ant.	Form Factor	Test Position	Duty Cycle	Dist.	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.								(dB)	(dB)	(dB)	(W/kg)		(W/kg)	(%)	
1 880	9400	RMC	I	Open	Rear	1:1	5	0.211								
1 880	9400	RMC	I	Open	Front	1:1	5	0.197								-
1 880	9400	RMC	I	Open	Right	1:1	5	0.563	19.5	18.44	-0.19	0.363	1.276	0.463	-17.76	B2
1 880	9400	RMC	I	Open	Top	1:1	5	0.046								
1 880	9400	RMC	I	Close	Rear	1:1	5	0.027								
1 880	9400	RMC	I	Close	Front	1:1	5	0.313								
1 880	9400	RMC	I	Close	Right	1:1	5	0.357	19.5	18.44	-0.02	0.263	1.276	0.336	-5.88	-
1 880	9400	RMC	I	Close	Top	1:1	5	0.018								
1 880	9400	RMC	I	Close	Bottom	1:1	5	0.033								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

LTE FDD Band 25(PCS) Body/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)	
1 905	26590	QPSK	I	Open	20	19.5	18.63	-0.03	Rear	0	1	49	1:1	5	0.189	1.222	0.231	-
1 905	26590	QPSK	I	Open	20	19.5	18.59	0.17	Rear	0	50	25	1:1	5	0.189	1.233	0.233	-
1 905	26590	QPSK	I	Open	20	19.5	18.63	-0.04	Front	0	1	49	1:1	5	0.282	1.222	0.345	-
1 905	26590	QPSK	I	Open	20	19.5	18.59	0.12	Front	0	50	25	1:1	5	0.277	1.233	0.342	-
1 905	26590	QPSK	I	Open	20	19.5	18.63	0.19	Right	0	1	49	1:1	5	0.405	1.222	0.495	B3
1 905	26590	QPSK	I	Open	20	19.5	18.59	0.17	Right	0	50	25	1:1	5	0.398	1.233	0.491	-
1 905	26590	QPSK	I	Open	20	19.5	18.63	0.17	Top	0	1	49	1:1	5	0.033	1.222	0.040	-
1 905	26590	QPSK	I	Open	20	19.5	18.59	0.10	Top	0	50	25	1:1	5	0.032	1.233	0.039	-
1 905	26590	QPSK	I	Close	20	19.5	18.63	0.19	Rear	0	1	49	1:1	5	0.025	1.222	0.031	-
1 905	26590	QPSK	I	Close	20	19.5	18.59	0.18	Rear	0	50	25	1:1	5	0.025	1.233	0.031	-
1 905	26590	QPSK	I	Close	20	19.5	18.63	0.14	Front	0	1	49	1:1	5	0.210	1.222	0.257	-
1 905	26590	QPSK	I	Close	20	19.5	18.59	0.11	Front	0	50	25	1:1	5	0.208	1.233	0.256	-
1 905	26590	QPSK	I	Close	20	19.5	18.63	-0.14	Right	0	1	49	1:1	5	0.379	1.222	0.463	-
1 905	26590	QPSK	I	Close	20	19.5	18.59	-0.16	Right	0	50	25	1:1	5	0.375	1.233	0.462	-
1 905	26590	QPSK	I	Close	20	19.5	18.63	0.12	Top	0	1	49	1:1	5	0.009 65	1.222	0.012	-
1 905	26590	QPSK	I	Close	20	19.5	18.59	-0.16	Top	0	50	25	1:1	5	0.006 66	1.233	0.008	-
1 905	26590	QPSK	I	Close	20	19.5	18.63	0.13	Bottom	0	1	49	1:1	5	0.013	1.222	0.016	-
1 905	26590	QPSK	I	Close	20	19.5	18.59	-0.10	Bottom	0	50	25	1:1	5	0.009 4	1.233	0.012	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE TDD Band 41 Body/Hotspot SAR- Original													LTE TDD Band 41 Body/Hotspot SAR- C2PC								
Frequency		Mode	Ant.	Form Factor	Band width	Test Position	MPR	RB Size	RB offset	Duty Cycle	Dist.	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.	
Mhz	Ch.																				(dB)
2 506	39750	QPSK	I	Open	20	Rear	0	1	0	1:1.58	5	0.162									
2 506	39750	QPSK	I	Open	20	Rear	0	50	0	1:1.58	5	0.169									
2 506	39750	QPSK	I	Open	20	Front	0	1	0	1:1.58	5	0.125									
2 506	39750	QPSK	I	Open	20	Front	0	50	0	1:1.58	5	0.137									
2 50	39750	QPSK	I	Open	20	Right	0	1	0	1:1.58	5	0.817									
2 549.5	40185	QPSK	I	Open	20	Right	0	1	0	1:1.58	5	1.012									
2 593	40620	QPSK	I	Open	20	Right	0	1	0	1:1.58	5	0.925									
2 636.5	41055	QPSK	I	Open	20	Right	0	1	0	1:1.58	5	0.846									
2 680	41490	QPSK	I	Open	20	Right	0	1	0	1:1.58	5	0.808									
2 506	39750	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	0.802									
2 549.5	40185	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	1.038									
2 593	40620	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	0.913									
2 636.5	41055	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	0.870									
2 680	41490	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	0.786									
2 506	39750	QPSK	I	Open	20	Right	0	100	0	1:1.58	5	0.943									
2 506	39750	QPSK	I	Open	20	Top	0	1	0	1:1.58	5	0.113									
2 506	39750	QPSK	I	Open	20	Top	0	50	0	1:1.58	5	0.121									
2 549.5	40185	QPSK	I	Open	20	Right	0	50	0	1:1.58	5	1.086	20.5	20.06	-0.12	0.725	1.107	0.803	-26.06	B4	
Power Class 2 (HPUE)																					
2 506	39750	QPSK	I	Open	20	Right	0	1	0	1:2.31	5	0.872									
2 506	39750	QPSK	I	Close	20	Rear	0	1	0	1:1.158	5	0.153									
2 506	39750	QPSK	I	Close	20	Rear	0	50	0	1:1.158	5	0.159									
2 506	39750	QPSK	I	Close	20	Front	0	1	0	1:1.158	5	0.445									
2 506	39750	QPSK	I	Close	20	Front	0	50	0	1:1.158	5	0.458									
2 506	39750	QPSK	I	Close	20	Right	0	1	0	1:1.158	5	0.860									
2 549.5	40185	QPSK	I	Close	20	Right	0	1	0	1:1.158	5	0.981									
2 593	40620	QPSK	I	Close	20	Right	0	1	0	1:1.158	5	0.985									
2 636.5	41055	QPSK	I	Close	20	Right	0	1	0	1:1.158	5	1.009									
2 680	41490	QPSK	I	Close	20	Right	0	1	0	1:1.158	5	1.041									
2 506	39750	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	0.877									
2 549	40185	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	1.031									
2 593	40620	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	0.993									
2 636	41055	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	1.047	20.5	20.11	-0.01	0.655	1.094	0.717	-31.52	-	
2 680	41490	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	1.028									
2 506	39750	QPSK	I	Close	20	Right	0	100	0	1:1.158	5	0.864									
2 506	39750	QPSK	I	Close	20	Top	0	1	0	1:1.158	5	0.030									
2 506	39750	QPSK	I	Close	20	Top	0	50	0	1:1.158	5	0.032									
2 506	39750	QPSK	I	Close	20	Bottom	0	1	0	1:1.158	5	0.122									
2 506	39750	QPSK	I	Close	20	Bottom	0	50	0	1:1.158	5	0.129									
2 636.5	41055	QPSK	I	Close	20	Right	0	50	0	1:1.158	5	0.893									
Power Class 2 (HPUE)																					
2506	39750	QPSK	I	Close	20	Right	0	1	0	1:2.31	5	0.761									
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram									

LTE Band 66 Body/Hotspot SAR- Original

LTE Band 66 Body/Hotspot SAR- C2PC

Frequency		Mode	Ant.	Form Factor	Band width	Test Position	MPR	RB Size	RB offset	Duty Cycle	Dist.	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.				(MHz)		(dB)				(mm)	(W/kg)	(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 770	132572	QPSK	I	Open	20	Rear	0	1	49	1:1	5	0.553								
1 770	132572	QPSK	I	Open	20	Rear	0	50	25	1:1	5	0.533								
1 770	132572	QPSK	I	Open	20	Front	0	1	49	1:1	5	0.396								
1 770	132572	QPSK	I	Open	20	Front	0	50	25	1:1	5	0.394								
1 770	132572	QPSK	I	Open	20	Right	0	1	49	1:1	5	0.565	20.5	20.45	0.12	0.347	1.012	0.351	-37.88	-
1 770	132572	QPSK	I	Open	20	Right	0	50	25	1:1	5	0.547								
1 770	132572	QPSK	I	Open	20	Top	0	1	49	1:1	5	0.048								
1 770	132572	QPSK	I	Open	20	Top	0	50	25	1:1	5	0.048								
1 770	132572	QPSK	I	Close	20	Rear	0	1	49	1:1	5	0.044								
1 770	132572	QPSK	I	Close	20	Rear	0	50	25	1:1	5	0.044								
1 770	132572	QPSK	I	Close	20	Front	0	1	49	1:1	5	0.288								
1 770	132572	QPSK	I	Close	20	Front	0	50	25	1:1	5	0.285								
1 770	132572	QPSK	I	Close	20	Right	0	1	49	1:1	5	0.526								
1 770	132572	QPSK	I	Close	20	Right	0	50	25	1:1	5	0.530	20.5	20.47	0.07	0.348	1.007	0.350	-33.96	B5
1 770	132572	QPSK	I	Close	20	Top	0	1	49	1:1	5	0.010								
1 770	132572	QPSK	I	Close	20	Top	0	50	25	1:1	5	0.008								
1 770	132572	QPSK	I	Close	20	Bottom	0	1	49	1:1	5	0.037								
1 770	132572	QPSK	I	Close	20	Bottom	0	50	25	1:1	5	0.038								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram								

NR Band n25 Body/Hotspot SAR- Original

NR Band n25 Body/Hotspot SAR- C2PC

Frequency		Mode	Ant.	Form Factor	Band width	Test Position	MPR	RB Size	RB offset	Duty Cycle	Dist.	Scaled SAR	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot No.
MHz	Ch.				(MHz)		(dB)				(mm)	(W/kg)	(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	
1 882.5	376500	DFT-s QPSK	I	Open	40	Rear	0	1	214	1:1	5	0.340								
1 882.5	376500	DFT-s QPSK	I	Open	40	Rear	0	108	108	1:1	5	0.331								
1 882.5	376500	DFT-s QPSK	I	Open	40	Front	0	1	214	1:1	5	0.574	19.5	19.45	-0.10	0.159	1.012	0.161	-71.95	-
1 882.5	376500	DFT-s QPSK	I	Open	40	Front	0	108	108	1:1	5	0.565								
1 882.5	376500	DFT-s QPSK	I	Open	40	Right	0	1	214	1:1	5	0.538	19.5	19.45	-0.18	0.497	1.012	0.503	-6.51	B6
1 882.5	376500	DFT-s QPSK	I	Open	40	Right	0	108	108	1:1	5	0.523								
1 882.5	376500	DFT-s QPSK	I	Open	40	Top	0	1	214	1:1	5	0.027								
1 882.5	376500	DFT-s QPSK	I	Open	40	Top	0	108	108	1:1	5	0.028								
1 882.5	376500	CP QPSK	I	Open	40	Front	0	1	1	1:1	5	0.522								
1 882.5	376500	DFT-s QPSK	I	Close	40	Rear	0	1	214	1:1	5	0.012								
1 882.5	376500	DFT-s QPSK	I	Close	40	Rear	0	108	108	1:1	5	0.011								
1 882.5	376500	DFT-s QPSK	I	Close	40	Front	0	1	214	1:1	5	0.307								
1 882.5	376500	DFT-s QPSK	I	Close	40	Front	0	108	108	1:1	5	0.303								
1 882.5	376500	DFT-s QPSK	I	Close	40	Right	0	1	214	1:1	5	0.349	19.5	19.45	-0.08	0.345	1.012	0.349	0.00	-
1 882.5	376500	DFT-s QPSK	I	Close	40	Right	0	108	108	1:1	5	0.334								
1 882.5	376500	DFT-s QPSK	I	Close	40	Top	0	1	214	1:1	5	0.007								
1 882.5	376500	DFT-s QPSK	I	Close	40	Top	0	108	108	1:1	5	0.005								
1 882.5	376500	DFT-s QPSK	I	Close	40	Bottom	0	1	214	1:1	5	0.015								
1 882.5	376500	DFT-s QPSK	I	Close	40	Bottom	0	108	108	1:1	5	0.021								
1 882.5	376500	CP QPSK	I	Close	40	Right	0	1	1	1:1	5	0.325								
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram								

NR TDD Band n41 Body/Hotspot SAR- Original

NR TDD Band n41 Body/Hotspot SAR- C2PC

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Dist. (mm)	Scaled SAR (W/kg)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Dev. (%)	Plot No.
MHz	Ch.												(dBm)	(dBm)	(dB)	(W/kg)				
2 592.99	518598	DFT-s QPSK	B	Open	100	Rear	0	1	1	1:1	5	0.427								
2 592.99	518598	DFT-s QPSK	B	Open	100	Rear	0	135	69	1:1	5	0.279								
2 592.99	518598	DFT-s QPSK	B	Open	100	Front	0	1	1	1:1	5	0.206								
2 592.99	518598	DFT-s QPSK	B	Open	100	Front	0	135	69	1:1	5	0.133								
2 592.99	518598	DFT-s QPSK	B	Open	100	Left	0	1	1	1:1	5	0.060								
2 592.99	518598	DFT-s QPSK	B	Open	100	Left	0	135	69	1:1	5	0.037								
2 592.99	518598	DFT-s QPSK	B	Open	100	Bottom	0	1	1	1:1	5	0.384								
2 592.99	518598	DFT-s QPSK	B	Open	100	Bottom	0	135	69	1:1	5	0.282								-
2 592.99	518598	CP QPSK	B	Open	100	Rear	0	1	1	1:1	5	0.344								
2 592.99	518598	DFT-s QPSK	B	Close	100	Rear	0	1	1	1:1	5	0.384								
2 592.99	518598	DFT-s QPSK	B	Close	100	Rear	0	135	69	1:1	5	0.253								
2 592.99	518598	DFT-s QPSK	B	Close	100	Front	0	1	1	1:1	5	0.063								
2 592.99	518598	DFT-s QPSK	B	Close	100	Front	0	135	69	1:1	5	0.032								
2 592.99	518598	DFT-s QPSK	B	Close	100	Left	0	1	1	1:1	5	0.059								
2 592.99	518598	DFT-s QPSK	B	Close	100	Left	0	135	69	1:1	5	0.042								
2 592.99	518598	DFT-s QPSK	B	Close	100	Bottom	0	1	1	1:1	5	0.243								
2 592.99	518598	DFT-s QPSK	B	Close	100	Bottom	0	135	69	1:1	5	0.171								
2 592.99	518598	CP QPSK	B	Close	100	Rear	0	1	1	1:1	5	0.366								
2 592.99	518598	DFT-s QPSK	I	Open	100	Rear	0	1	1	1:1	5	0.609								
2 592.99	518598	DFT-s QPSK	I	Open	100	Rear	0	135	69	1:1	5	0.439								
2 592.99	518598	DFT-s QPSK	I	Open	100	Rear	0	270	0	1:1	5	0.448								
2 592.99	518598	DFT-s QPSK	I	Open	100	Front	0	1	1	1:1	5	0.532								
2 592.99	518598	DFT-s QPSK	I	Open	100	Front	0	135	69	1:1	5	0.537								
2 592.99	518598	DFT-s QPSK	I	Open	100	Right	0	1	1	1:1	5	1.012								
2 592.99	518598	DFT-s QPSK	I	Open	100	Right	0	135	69	1:1	5	1.005								
2 592.99	518598	DFT-s QPSK	I	Open	100	Right	0	270	0	1:1	5	0.971								-
2 592.99	518598	DFT-s QPSK	I	Open	100	Top	0	1	1	1:1	5	0.154								
2 592.99	518598	DFT-s QPSK	I	Open	100	Top	0	135	69	1:1	5	0.118								
2 592.99	518598	CP QPSK	I	Open	100	Right	0	1	1	1:1	5	1.070	18.0	17.99	0.15	0.790	1.002	0.792	-18.97	B7
2 592.99	518598	CP QPSK	I	Open	100	Right	0	1	1	1:1	5	1.059								
2 592.99	518598	DFT-s QPSK	I	Close	100	Rear	0	1	1	1:1	5	0.236								
2 592.99	518598	DFT-s QPSK	I	Close	100	Rear	0	135	138	1:1	5	0.269								
2 592.99	518598	DFT-s QPSK	I	Close	100	Front	0	1	1	1:1	5	0.455								
2 592.99	518598	DFT-s QPSK	I	Close	100	Front	0	135	138	1:1	5	0.363								
2 592.99	518598	DFT-s QPSK	I	Close	100	Front	0	270	0	1:1	5	0.455								
2 592.99	518598	DFT-s QPSK	I	Close	100	Right	0	1	1	1:1	5	0.917								
2 592.99	518598	DFT-s QPSK	I	Close	100	Right	0	135	138	1:1	5	0.892								
2 592.99	518598	DFT-s QPSK	I	Close	100	Right	0	270	0	1:1	5	0.994	18.0	17.99	0.19	0.659	1.002	0.660	-27.36	-
2 592.99	518598	DFT-s QPSK	I	Close	100	Top	0	1	1	1:1	5	0.021								
2 592.99	518598	DFT-s QPSK	I	Close	100	Top	0	135	138	1:1	5	0.011								
2 592.99	518598	DFT-s QPSK	I	Close	100	Bottom	0	1	1	1:1	5	0.132								
2 592.99	518598	DFT-s QPSK	I	Close	100	Bottom	0	135	138	1:1	5	0.064								
2 592.99	518598	CP QPSK	I	Close	100	Right	0	1	1	1:1	5	0.940								
2 592.99	518598	DFT-s QPSK	I	Close	100	Right	0	270	0	1:1	5	0.931								

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NR TDD Band n41 SRS C Body/Hotspot SAR- Original

NR TDD Band n41 Body/Hotspot SAR- C2PC

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Dist. (mm)	Scaled SAR (W/kg)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Dev. (%)	Plot No.
MHz	Ch.																			
2 592.99	518598	DFT-s QPSK	SRS C	Open	100	Rear	0	1	137	1:1	5	0.757								
2 592.99	518598	DFT-s QPSK	SRS C	Open	100	Front	0	1	137	1:1	5	0.944	22.0	21.33	0.02	0.401	1.167	0.468	-50.42	-
2 592.99	518598	DFT-s QPSK	SRS C	Open	100	Left	0	1	137	1:1	5	0.794								
2 592.99	518598	DFT-s QPSK	SRS C	Open	100	Bottom	0	1	137	1:1	5	0.091								
2 592.99	518598	DFT-s QPSK	SRS C	Open	100	Front	0	1	137	1:1	5	0.958								
2 592.99	518598	DFT-s QPSK	SRS C	Close	100	Rear	0	1	137	1:1	5	0.462								
2 592.99	518598	DFT-s QPSK	SRS C	Close	100	Front	0	1	137	1:1	5	0.053								
2 592.99	518598	DFT-s QPSK	SRS C	Close	100	Left	0	1	137	1:1	5	0.780	22.0	21.33	-0.14	0.348	1.167	0.406	-47.95	-
2 592.99	518598	DFT-s QPSK	SRS C	Close	100	Top	0	1	137	1:1	5	0.023								
2 592.99	518598	DFT-s QPSK	SRS C	Close	100	Bottom	0	1	137	1:1	5	0.079								

ANSI/ IEEE C95.1 - 2005- Safety Limit
Spatial Peak
Uncontrolled Exposure/ General Population

Body
1.6 W/kg
Averaged over 1 gram

NR TDD Band n41 SRS B,I,G Body/Hotspot SAR C2PC

Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.																	
2 592.99	518598	DFT-s QPSK	SRS B	Open	100	14.0	13.98	0.00	Rear	0	1	137	1:1	5	0.124	1.005	0.125	-
2 592.99	518598	DFT-s QPSK	SRS B	Open	100	14.0	13.98	0.00	Front	0	1	137	1:1	5	0.070	1.005	0.070	-
2 592.99	518598	DFT-s QPSK	SRS B	Open	100	14.0	13.98	0.18	Left	0	1	137	1:1	5	0.022	1.005	0.022	-
2 592.99	518598	DFT-s QPSK	SRS B	Open	100	14.0	13.98	0.11	Bottom	0	1	137	1:1	5	0.127	1.005	0.128	-
2 592.99	518598	DFT-s QPSK	SRS B	Close	100	14.0	13.98	0.00	Rear	0	1	137	1:1	5	0.125	1.005	0.126	-
2 592.99	518598	DFT-s QPSK	SRS B	Close	100	14.0	13.98	0.00	Front	0	1	137	1:1	5	0.012	1.005	0.012	-
2 592.99	518598	DFT-s QPSK	SRS B	Close	100	14.0	13.98	0.19	Left	0	1	137	1:1	5	0.037	1.005	0.037	-
2 592.99	518598	DFT-s QPSK	SRS B	Close	100	14.0	13.98	0.00	Top	0	1	137	1:1	5	0.00079	1.005	0.001	-
2 592.99	518598	DFT-s QPSK	SRS B	Close	100	14.0	13.98	0.19	Bottom	0	1	137	1:1	5	0.118	1.005	0.119	-
2 592.99	518598	DFT-s QPSK	SRS I	Open	100	14.0	13.96	0.10	Rear	0	1	137	1:1	5	0.098	1.009	0.099	-
2 592.99	518598	DFT-s QPSK	SRS I	Open	100	14.0	13.96	0.02	Front	0	1	137	1:1	5	0.098	1.009	0.099	-
2 592.99	518598	DFT-s QPSK	SRS I	Open	100	14.0	13.96	0.11	Right	0	1	137	1:1	5	0.182	1.009	0.184	-
2 592.99	518598	DFT-s QPSK	SRS I	Open	100	14.0	13.96	0.14	Top	0	1	137	1:1	5	0.028	1.009	0.028	-
2 592.99	518598	DFT-s QPSK	SRS I	Close	100	14.0	13.96	0.11	Rear	0	1	137	1:1	5	0.044	1.009	0.044	-
2 592.99	518598	DFT-s QPSK	SRS I	Close	100	14.0	13.96	0.05	Front	0	1	137	1:1	5	0.053	1.009	0.053	-
2 592.99	518598	DFT-s QPSK	SRS I	Close	100	14.0	13.96	0.13	Right	0	1	137	1:1	5	0.149	1.009	0.150	-
2 592.99	518598	DFT-s QPSK	SRS I	Close	100	14.0	13.96	0.17	Top	0	1	137	1:1	5	0.000	1.009	0.000	-
2 592.99	518598	DFT-s QPSK	SRS I	Close	100	14.0	13.96	0.15	Bottom	0	1	137	1:1	5	0.022	1.009	0.022	-
2 592.99	518598	DFT-s QPSK	SRS G	Open	100	16.0	15.30	0.17	Rear	0	1	137	1:1	5	0.388	1.175	0.456	B8
2 592.99	518598	DFT-s QPSK	SRS G	Open	100	16.0	15.30	0.13	Front	0	1	137	1:1	5	0.267	1.175	0.314	-
2 592.99	518598	DFT-s QPSK	SRS G	Open	100	16.0	15.30	0.17	Left	0	1	137	1:1	5	0.073	1.175	0.086	-
2 592.99	518598	DFT-s QPSK	SRS G	Open	100	16.0	15.30	0.17	Top	0	1	137	1:1	5	0.323	1.175	0.380	-
2 592.99	518598	DFT-s QPSK	SRS G	Close	100	16.0	15.30	-0.13	Rear	0	1	137	1:1	5	0.055	1.175	0.065	-
2 592.99	518598	DFT-s QPSK	SRS G	Close	100	16.0	15.30	0.13	Front	0	1	137	1:1	5	0.301	1.175	0.354	-
2 592.99	518598	DFT-s QPSK	SRS G	Close	100	16.0	15.30	0.17	Left	0	1	137	1:1	5	0.129	1.175	0.152	-
2 592.99	518598	DFT-s QPSK	SRS G	Close	100	16.0	15.30	0.16	Top	0	1	137	1:1	5	0.00027	1.175	0.000	-
2 592.99	518598	DFT-s QPSK	SRS G	Close	100	16.0	15.30	-0.03	Bottom	0	1	137	1:1	5	0.326	1.175	0.383	-

ANSI/ IEEE C95.1 - 2005- Safety Limit
Spatial Peak
Uncontrolled Exposure/ General Population

Body
1.6 W/kg
Averaged over 1 gram

NR Band n66 Body/Hotspot SAR- Original													NR Band n66 Body/Hotspot SAR- C2PC							
Frequency		Mode	Ant.	Form Factor	Band width (MHz)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Dist. (mm)	Scaled SAR (W/kg)	Tune-Up Limit	Meas. Power	Power Drift	Meas. SAR	Scaling Factor	Scaled SAR	Dev.	Plot
MHz	Ch.												(dBm)	(dBm)	(dB)	(W/kg)		(W/kg)	(%)	No.
1 745	349000	DFT-s QPSK	I	Open	40	Rear	0	1	214	1:1	5	0.562	20.5	20.49	0.19	0.290	1.002	0.291	-48.22	
1 745	349000	DFT-s QPSK	I	Open	40	Rear	0	108	108	1:1	5	0.545								
1 745	349000	DFT-s QPSK	I	Open	40	Front	0	1	214	1:1	5	0.555								
1 745	349000	DFT-s QPSK	I	Open	40	Front	0	108	108	1:1	5	0.523								
1 745	349000	DFT-s QPSK	I	Open	40	Right	0	1	214	1:1	5	0.497								
1 745	349000	DFT-s QPSK	I	Open	40	Right	0	108	108	1:1	5	0.509	20.5	20.49	-0.12	0.469	1.002	0.470	-7.66	B9
1 745	349000	DFT-s QPSK	I	Open	40	Top	0	1	214	1:1	5	0.053								
1 745	349000	DFT-s QPSK	I	Open	40	Top	0	108	108	1:1	5	0.054								
1 745	349000	CP QPSK	I	Open	40	Rear	0	1	1	1:1	5	0.503								
1 745	349000	DFT-s QPSK	I	Close	40	Rear	0	1	214	1:1	5	0.025								
1 745	349000	DFT-s QPSK	I	Close	40	Rear	0	108	108	1:1	5	0.023								
1 745	349000	DFT-s QPSK	I	Close	40	Front	0	1	214	1:1	5	0.211								
1 745	349000	DFT-s QPSK	I	Close	40	Front	0	108	108	1:1	5	0.210								
1 745	349000	DFT-s QPSK	I	Close	40	Right	0	1	214	1:1	5	0.332								
1 745	349000	DFT-s QPSK	I	Close	40	Right	0	108	108	1:1	5	0.339								
1 745	349000	DFT-s QPSK	I	Close	40	Top	0	1	214	1:1	5	0.007								
1 745	349000	DFT-s QPSK	I	Close	40	Top	0	108	108	1:1	5	0.003								
1 745	349000	DFT-s QPSK	I	Close	40	Bottom	0	1	214	1:1	5	0.035								
1 745	349000	DFT-s QPSK	I	Close	40	Bottom	0	108	108	1:1	5	0.035								
1 745	349000	CP QPSK	I	Close	40	Right	0	1	1	1:1	5	0.405	20.5	20.33	0.04	0.215	1.040	0.224	-44.69	
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram								

NR TDD Band n77 Hotspot SAR

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)										
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.39	-0.17	Rear	0	1	1	1:1	5	0.084	1.026	0.086	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.34	0.00	Rear	0	135	0	1:1	5	0.107	1.038	0.111	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.39	0.00	Front	0	1	1	1:1	5	0.068	1.026	0.070	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.34	0.07	Front	0	135	0	1:1	5	0.051	1.038	0.053	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.39	0.09	Left	0	1	1	1:1	5	0.147	1.026	0.151	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.34	0.06	Left	0	135	0	1:1	5	0.115	1.038	0.119	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.39	0.00	Top	0	1	1	1:1	5	0.152	1.026	0.156	-
3 750	650000	DFT-s QPSK	F	Open	100	14.5	14.34	0.12	Top	0	135	0	1:1	5	0.158	1.038	0.164	-
3 500.01	633334	DFT-s QPSK	F	Open	100	14.5	14.48	-0.08	Left	0	1	1	1:1	5	0.187	1.005	0.188	-
3 750	650000	CP QPSK	F	Open	100	14.5	14.15	0.14	Left	0	1	1	1:1	5	0.182	1.084	0.197	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.39	-0.13	Rear	0	1	1	1:1	5	0.039	1.026	0.040	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.34	0.00	Rear	0	135	0	1:1	5	0.029	1.038	0.030	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.39	-0.01	Front	0	1	1	1:1	5	0.114	1.026	0.117	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.34	-0.02	Front	0	135	0	1:1	5	0.145	1.038	0.151	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.39	0.05	Left	0	1	1	1:1	5	0.224	1.026	0.230	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.34	0.07	Left	0	135	0	1:1	5	0.262	1.038	0.272	B10
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.39	0.04	Bottom	0	1	1	1:1	5	0.146	1.026	0.150	-
3 750	650000	DFT-s QPSK	F	Close	100	14.5	14.34	0.04	Bottom	0	135	0	1:1	5	0.149	1.038	0.155	-
3 500.01	633334	DFT-s QPSK	F	Close	100	14.5	14.48	0.07	Left	0	1	1	1:1	5	0.107	1.005	0.108	-
3 750	650000	CP QPSK	F	Close	100	14.5	14.15	0.14	Left	0	1	1	1:1	5	0.200	1.084	0.217	-
3 930	662000	DFT-s QPSK	SRS I	Open	100	14.5	14.30	0.00	Rear	0	1	137	1:1	5	0.071	1.047	0.074	-
3 930	662000	DFT-s QPSK	SRS I	Open	100	14.5	14.30	0.00	Front	0	1	137	1:1	5	0.071	1.047	0.074	-
3 930	662000	DFT-s QPSK	SRS I	Open	100	14.5	14.30	0.12	Right	0	1	137	1:1	5	0.025	1.047	0.026	-
3 930	662000	DFT-s QPSK	SRS I	Open	100	14.5	14.30	0.00	Top	0	1	137	1:1	5	0.000	1.047	0.000	-
3 500.01	633334	DFT-s QPSK	SRS I	Open	100	14.5	14.21	0.10	Rear	0	1	137	1:1	5	0.072	1.069	0.077	-
3 930	662000	DFT-s QPSK	SRS I	Close	100	14.5	14.30	0.00	Rear	0	1	137	1:1	5	0.000	1.047	0.000	-
3 930	662000	DFT-s QPSK	SRS I	Close	100	14.5	14.30	-0.18	Front	0	1	137	1:1	5	0.048	1.047	0.050	-
3 930	662000	DFT-s QPSK	SRS I	Close	100	14.5	14.30	0.12	Right	0	1	137	1:1	5	0.047	1.047	0.049	-
3 930	662000	DFT-s QPSK	SRS I	Close	100	14.5	14.30	0.00	Top	0	1	137	1:1	5	0.000	1.047	0.000	-
3 930	662000	DFT-s QPSK	SRS I	Close	100	14.5	14.30	0.00	Bottom	0	1	137	1:1	5	0.000	1.047	0.000	-
3 500.01	633334	DFT-s QPSK	SRS I	Close	100	14.5	14.21	-0.14	Front	0	1	137	1:1	5	0.085	1.069	0.091	-
3 930	662000	DFT-s QPSK	SRS E	Open	100	14.5	14.33	-0.19	Rear	0	1	137	1:1	5	0.159	1.040	0.165	-
3 930	662000	DFT-s QPSK	SRS E	Open	100	14.5	14.33	0.00	Front	0	1	137	1:1	5	0.095	1.040	0.099	-
3 930	662000	DFT-s QPSK	SRS E	Open	100	14.5	14.33	0.00	Left	0	1	137	1:1	5	0.000 004 21	1.040	0.000	-
3 930	662000	DFT-s QPSK	SRS E	Open	100	14.5	14.33	0.18	Top	0	1	137	1:1	5	0.000 341	1.040	0.000	-
3 500.01	633334	DFT-s QPSK	SRS E	Open	100	14.5	14.43	0.09	Rear	0	1	137	1:1	5	0.080	1.016	0.081	-
3 930	662000	DFT-s QPSK	SRS E	Close	100	14.5	14.33	0.11	Rear	0	1	137	1:1	5	0.023	1.040	0.024	-
3 930	662000	DFT-s QPSK	SRS E	Close	100	14.5	14.33	-0.14	Front	0	1	137	1:1	5	0.100	1.040	0.104	-
3 930	662000	DFT-s QPSK	SRS E	Close	100	14.5	14.33	0.10	Left	0	1	137	1:1	5	0.000125	1.040	0.000	-
3 930	662000	DFT-s QPSK	SRS E	Close	100	14.5	14.33	0.00	Top	0	1	137	1:1	5	0.00332	1.040	0.003	-
3 930	662000	DFT-s QPSK	SRS E	Close	100	14.5	14.33	0.00	Bottom	0	1	137	1:1	5	0.00339	1.040	0.004	-
3 500.01	633334	DFT-s QPSK	SRS E	Close	100	14.5	14.43	0.00	Front	0	1	137	1:1	5	0.031	1.016	0.031	-

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NR TDD Band n77 Body/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)										
3 750	650000	DFT-s QPSK	SRSC	Open	100	14.5	14.33	0.00	Rear	0	1	137	1:1	5	0.090	1.040	0.094	-
3 750	650000	DFT-s QPSK	SRSC	Open	100	14.5	14.33	0.00	Front	0	1	137	1:1	5	0.092	1.040	0.096	-
3 750	650000	DFT-s QPSK	SRSC	Open	100	14.5	14.33	0.12	Left	0	1	137	1:1	5	0.122	1.040	0.127	-
3 750	650000	DFT-s QPSK	SRSC	Open	100	14.5	14.33	0.00	Bottom	0	1	137	1:1	5	0.076	1.040	0.079	-
3 500.01	633334	DFT-s QPSK	SRSC	Open	100	14.5	13.90	0.18	Left	0	1	137	1:1	5	0.132	1.148	0.152	-
3 750	650000	DFT-s QPSK	SRSC	Close	100	14.5	14.33	0.00	Rear	0	1	137	1:1	5	0.034	1.040	0.035	-
3 750	650000	DFT-s QPSK	SRSC	Close	100	14.5	14.33	0.00	Front	0	1	137	1:1	5	0.014	1.040	0.015	-
3 750	650000	DFT-s QPSK	SRSC	Close	100	14.5	14.33	0.09	Left	0	1	137	1:1	5	0.154	1.040	0.160	-
3 750	650000	DFT-s QPSK	SRSC	Close	100	14.5	14.33	0.00	Top	0	1	137	1:1	5	0.000	1.040	0.000	-
3 750	650000	DFT-s QPSK	SRSC	Close	100	14.5	14.33	0.00	Bottom	0	1	137	1:1	5	0.035	1.040	0.036	-
3 500.01	633334	DFT-s QPSK	SRSC	Close	100	14.5	13.90	0.13	Left	0	1	137	1:1	5	0.143	1.148	0.164	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak										Body 1.6 W/kg Averaged over 1 gram								
Uncontrolled Exposure/ General Population																		

Note : Ant I, E, C SRS was tested with DFT-s OFDM QPSK 1RB 137offset as CW was the Limitation of the manufacturer's S/W tool setup.

13.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 5 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was 1.2 W/kg, no additional SAR evaluation using a headset cable were required.
8. The 1g SAR test for Body worn and Hotspot in WWAN mode and WLAN/BT mode of this DUT is performed 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. The simultaneous transmission evaluation of multiple Tx was re-evaluated including both the original model measurement results [Report no: HCT-SR-2505-FC008-R2] and the C2PC test results. See Appendix I. for multi-Tx simultaneous transmission analysis results

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

NR Notes:

1. NR This device supports SA and NSA mode for NR implementation. In EN-DC Mode, NR operate with the LTE Bands shown in the NR FR1 checklist acting as anchor Bands.
2. Due to Limitations of the SAR measurement equipment, SAR testing for NR TDD Bands was performed separately using test mode (FTM) software.
3. More detailed specifications of the NR Bands are contained in the technical description document.
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power was evaluated for SAR tests.
6. SRS was tested with DFT-s OFDM QPSK 1RB Mid offset as CW was the Limitation of the manufacturer's S/W tool(FTM) setup.

14. 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.

15. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 Lspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	D21142603	S-1203 0309	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	D21142605	S-1338 1332	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331953309	01/16/2025	Annual	01/16/2026
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331915309	12/26/2024	Annual	12/26/2025
SPEAG	DAE4	868	09/19/2024	Annual	09/19/2025
SPEAG	DAE4	1687	07/12/2024	Annual	07/12/2025
SPEAG	DAE4	446	03/19/2025	Annual	03/19/2026
SPEAG	DAE4	1750	09/13/2024	Annual	09/13/2025
SPEAG	E-Field Probe EX3DV4	7732	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe EX3DV4	7679	08/22/2024	Annual	08/22/2025
SPEAG	E-Field Probe EX3DV4	3903	07/31/2024	Annual	07/31/2025
SPEAG	E-Field Probe ES3DV3	3076	07/17/2024	Annual	07/17/2025
SPEAG	Dipole D1800V2	2d015	04/17/2025	Annual	04/17/2026
SPEAG	Dipole D1900V2	5d061	01/20/2025	Annual	01/20/2026
SPEAG	Dipole D2600V2	1106	04/15/2025	Annual	04/15/2026
SPEAG	Dipole D3500V2	1040	01/16/2025	Annual	01/16/2026
SPEAG	Dipole D3700V2	1105	09/18/2024	Annual	09/18/2025
SPEAG	Dipole D3900V2	1019	05/21/2025	Annual	05/21/2026
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
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	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
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
Keysight	PSG Vector Signal Generator	MY50350097	03/05/2025	Annual	03/05/2026
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/11/2024	Annual	09/11/2025

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
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-30N	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	06/09/2025	Annual	06/09/2026
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 Tester MT8820C	6200695605	03/21/2025	Annual	03/21/2026
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2025	Annual	05/21/2026

* 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.

16. 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-FC013-P