

TEST REPORT

SAR Test for SM-X406B Certification

APPLICANT

Samsung Electronics. Co., Ltd.

REPORT NO.

HCT-SR-2506-FC015-R3

DATE OF ISSUE

Jul. 14, 2025

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TEST REPORT

FCC Part 1 SAR Test
for certification

REPORT NO.

HCT-SR-2506-FC015-R3

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FCC ID

A3LSMX406B

Applicant

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

Product Name

Tablet

Model Name

SM-X406B

Date of Test

May. 15, 2025~ Jul. 11, 2025

Location of Test

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

FCC Rule Part(s)

CFR § 2.1093

Test Results

PASS (SAR Limit : 1.6 W/kg)
Refer to the clause 3.2 Attestation of test result

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Jun. 19, 2025	Initial Release
1	Jun. 26, 2025	Revised Sec 3,8,13,14
2	Jul. 9, 2025	Revised Sec 8, Appendix H, Typo Revised Page 8, 10, 133, 136, 137
3	Jul. 14, 2025	Revised Sub2 Ant.

Notice

Content

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

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

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

Information provided by the applicant is marked **.

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

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

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

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1. Test Regulations

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

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D01 General RF Exposure Guidance v06
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

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

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Overlapping LTE Bands Test exclusion)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- April 2018 TCBC Workshop Notes (LTE UL CA, DL CA SAR Test Exclusion)
- April 2022 TCBC Workshop Notes (Sum-Peak Location Separation Ratio)

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-X406B
Equipment Type	Tablet
FCC ID	A3LSMX406B
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

The Highest Reported SAR			
Band	Tx. Frequency	Equipment Class	Reported Body SAR 1g (W/kg)
GSM/GPRS/EDGE 850	824.2 MHz ~ 848.8 MHz	PCB	0.76
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCB	0.49
UMTS Band 5	826.4 MHz ~ 846.6 MHz	PCB	0.62
UMTS Band 4	1 712.4 MHz ~ 1 752.6 MHz	PCB	0.68
UMTS Band 2	1 852.4 MHz ~ 1 907.6 MHz	PCB	0.58
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCB	0.50
LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCB	N/A
LTE FDD Band 5 (Cell)	824.7 MHz ~ 848.3 MHz	PCB	0.56
LTE FDD Band 12	699.7 MHz ~ 715.3 MHz	PCB	0.41
LTE FDD Band 13	779.5 MHz ~ 784.5 MHz	PCB	0.48
LTE FDD Band 17	706.5 MHz ~ 713.5 MHz	PCB	N/A
LTE FDD Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCB	0.55
LTE FDD Band 26 (Cell)	814.7 MHz ~ 848.3 MHz	PCB	0.49
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCB	0.70
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCB	0.56
NR FDD Band n5	826.5 MHz ~ 846.5 MHz	PCB	0.52
NR FDD Band n26	816.5 MHz ~ 846.5 MHz	PCB	0.57
NR TDD Band n41	2 506.02 MHz ~ 2 679.99 MHz	PCB	0.79
NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz	PCB	0.56
NR FDD Band n71	665.5 MHz ~ 695.5 MHz	PCB	0.79
NR TDD Band n77	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCB	0.67
NR TDD Band n78	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCB	N/A
2.4 GHz WLAN	2 412 MHz ~ 2 472 MHz	DTS	0.52
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	0.58
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	1.12
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.85
U-NII-4	5 845 MHz ~ 5 885 MHz	NII	0.85
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS	0.26
Simultaneous SAR per KDB 690783 D01v01r03			1.546
Date(s) of Tests:	May. 15, 2025~ Jul. 11, 2025		

Summary table of SAR measurement results	
SAR test Configuration	The Highest SAR (W/kg)
Body-SAR	1.12
Simultaneous transmission	1.546

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Data	824.2 MHz ~ 848.8 MHz
GSM1900	Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 12	Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 17	Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 41	Data	2 498.5 MHz ~ 2 687.5 MHz
LTE FDD Band 66 (AWS)	Data	1 710.7 MHz ~ 1 779.3 MHz
NR FDD Band n5	Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n26	Data	816.5 MHz ~ 846.5 MHz
NR TDD Band n41	Data	2 501.01 MHz ~ 2 685 MHz
NR FDD Band n66	Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n71	Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Data	3 455.01 MHz ~ 3 544.98 MHz
NR TDD Band n78	Data	3 705 MHz ~ 3 795 MHz
NR TDD Band n78 DoD	Data	3 455.01 MHz ~ 3 544.98 MHz
U-NII-1	Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Data	5 745 MHz ~ 5 825 MHz
U-NII-4	Data	5 845 MHz ~ 5 885 MHz
2.4 GHz WLAN	Data	2 412 MHz ~ 2 472 MHz
Bluetooth / LE 5.3	Data	2 402 MHz ~ 2 480 MHz
S-Pen	Data	531.25 kHz, 562.5 kHz, 593.75 kHz, 656.25 kHz
Device Description		
Battery	EB-BX526ABY (ATL)	
Cover	EF-DX720(Variant 1), EF-DX725(Variant 2)	
S Pen	CP-911-21B (WACOM)	
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900, UMTS Band 2,4,5 LTE Band 2, 5, 12, 13, 25, 26, 41, 66 NR Band n5, 26, 66, 71, n41, n41 SRS1/2/3, NR Band n77	YD01779M, YD01811M, YD01817M, YF92113M
	NR Band n71	YD01799M
	WLAN 2.4G	YE71769M, YE71815M, YE71771M
	WLAN 5G, BT	YF92113M, YF92113M, YF92113M
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Time-Averaging Algorithm for RF Exposure Compliance

This device is enabled with the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from 2G/3G/4G/5G NR WWAN except WLAN/BT is in compliance with FCC requirements.

This SAR Char. Report shows SAR characterization of WWAN radios for 2G/3G/4G and 5G Sub-6 NR respectively. Characterization is achieved by determining Plimit for 2G/3G/4G and 5G Sub-6 NR except WLAN/BT correspond to the exposure design targets after accounting for all device design related uncertainties, i.e. SAR_design_target (< FCC SAR limit) for sub-6 radio. The SAR characterization is denoted as SAR Char in this report. Section 2.3 includes a nomenclature of the specific terms used in this report.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 report. The validation of the time-averaging algorithm and compliance under the dynamic (time- varying) transmission scenario for WWAN technologies are reported in Part 2 report.

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.

This DUT is enabled with the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm for WWAN Mode in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement

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

The Samsung S.LSI 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 Body SAR of WWAN Mode, Device State Index RSI for WLAN mode).

Note that the device uncertainty for sub-6GHz 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.

Table 4-4 SAR Characterization

Plimit values in green indicate Plimit < Pmax										Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Plimit corresponding to 1 W/kg (1g) SAR_Design_target										
SAR Exposure Position			Free	Grip#1 RSI=1	Grip#2 RSI=2	Grip#3 RSI=3	Grip#4 RSI=4	Grip#5 RSI=5	Grip#6 RSI=6	
Averaging volume			1g	1g	1g	1g	1g	1g	1g	
seperation Distance			0,10,11,21,26mm	0mm	0mm	0mm	0mm	0mm	0mm	
Mode	Band	Antenna	Free	Grip	Grip	Grip	Grip	Grip	Grip	
GSM/GPRS/EDGE	850	Main1	28.8	21.2	15.0	21.2	N/A	N/A	N/A	23.8
GSM/GPRS/EDGE	1900	Main1	31.5	20.0	14.0	20.0	N/A	N/A	N/A	21.8
UMTS	2	Main1	30.0	19.0	12.5	19.0	N/A	N/A	N/A	23.0
UMTS	4	Main1	30.3	20.5	13.0	20.5	N/A	N/A	N/A	23.0
UMTS	5	Main1	28.1	21.5	15.0	21.5	N/A	N/A	N/A	23.0
LTE FDD	25(2)	Main1	29.2	18.0	12.0	18.0	N/A	N/A	N/A	23.0
LTE FDD	2	Sub2	27.0	N/A	N/A	N/A	N/A	10.5	N/A	23.0
LTE FDD	66(4)	Main1	28.9	18.0	12.0	18.0	N/A	N/A	N/A	23.0
LTE FDD	66(4)	Sub2	28.0	N/A	N/A	N/A	N/A	11.0	N/A	23.0
LTE FDD	12(17)	Main1	29.7	N/A	15.0	N/A	N/A	N/A	N/A	23.0
LTE FDD	13	Main1	27.2	N/A	13.0	N/A	N/A	N/A	N/A	23.0
LTE FDD	5	Main1	27.5	22.0	14.0	22.0	N/A	N/A	N/A	24.0
LTE FDD	26	Main1	28.2	22.0	14.0	22.0	N/A	N/A	N/A	23.0
LTE TDD PC3	41	Main1	31.1	N/A	11.5	N/A	N/A	N/A	N/A	22.0
NR FDD	5	Main1	27.8	N/A	14.0	N/A	N/A	N/A	N/A	24.0
NR FDD	26	Main1	27.4	22.0	14.0	22.0	N/A	N/A	N/A	23.0
NR FDD	66	Main1	30.8	18.0	12.0	18.0	N/A	N/A	N/A	23.0
NR FDD	71	Main1	32.3	N/A	16.0	N/A	N/A	N/A	N/A	24.5
NR TDD	NR n41 SRS0	Main1	19.0	N/A	9.0	N/A	N/A	N/A	N/A	24.0
NR TDD	NR n41 SRS1	Sub2	10.0	N/A	N/A	N/A	N/A	N/A	N/A	14.0
NR TDD	NR n41 SRS2	Sub4	10.0	N/A	N/A	N/A	N/A	N/A	N/A	14.0
NR TDD	NR n41 SRS3	Sub1	10.0	N/A	N/A	N/A	N/A	N/A	N/A	13.0
NR TDD	NR n77 PC3	Main2	19.0	N/A	N/A	N/A	9.0	N/A	N/A	24.5
NR TDD	NR n77 PC2	Main2	19.0	N/A	N/A	N/A	9.0	N/A	N/A	26.0
NR TDD	NR n77 DoD PC3	Main2	19.0	N/A	N/A	N/A	9.0	N/A	N/A	24.5
NR TDD	NR n77 DoD PC2	Main2	19.0	N/A	N/A	N/A	9.0	N/A	N/A	26.0

*Note all Plimit and maximum tune up output power Pmax levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM, LTE TDD, 5G NR TDD).

*The maximum time-averaged output power (dBm) for any 3G/4G/5G WWAN technology, band, and SAR Exposure condition=minimum of “Plimit” and “Maximum tune up output power: “Pmax” + 1dB device uncertainty.

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.

4.3 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.

This device uses an independent fixed level power reduction mechanism for WLAN operations when during the user's proximity to the human body scenarios. The reduced powers for the power reduction mechanisms were conformed via conducted power measurements at the RF Port.

4.4 Nominal and Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

4.4.1 2G/3G/4G/5G Nominal Output Power

The contents of RSI are as follows.

- a. RSI 0: Free, Grip Sensor Off
- b. RSI 1: GRIP 1 ON Power Back-off
- c. RSI 2: GRIP 2 ON Power Back-off
- d. RSI 3: GRIP 3 ON Power Back-off
- e. RSI 4: GRIP 4 ON Power Back-off
- f. RSI 5: GRIP 5 ON Power Back-off
- g. RSI 6 : GRIP 6 ON Power Back-off
- h. Pmax: Maximum Power

A. GSM Modes

RSI				Modulated Average (dBm)							Pmax (Maximum Target Power)
Mode	Band	ANT	Data – Burst Average GMSK (in dBm)	0	1	2	3	4	5	6	
GSM	850	Main 1	1 Tx Slot	32.5	31.0	23.0	31.0	N/A	N/A	N/A	32.5
			2 Tx Slot	30.0	28.5	21.0	28.5	N/A	N/A	N/A	
			3 Tx Slot	28.0	26.5	19.0	26.5	N/A	N/A	N/A	
			4 Tx Slot	27.0	25.5	18.0	25.5	N/A	N/A	N/A	
GSM	1900	Main 1	1 Tx Slot	29.5	27.5	21.0	27.5	N/A	N/A	N/A	29.5
			2 Tx Slot	27.5	25.5	19.5	25.5	N/A	N/A	N/A	
			3 Tx Slot	26.0	24.0	18.0	24.0	N/A	N/A	N/A	
			4 Tx Slot	25.0	23.0	17.0	23.0	N/A	N/A	N/A	

Tolerance: -1.5 dB / +1.0 dB

RSI				Modulated Average (dBm)							Pmax (Maximum Target Power)
Mode	Band	ANT	Data – Burst Average 8-PSK (in dBm)	0	1	2	3	4	5	6	
GSM	850	Main 1	1 Tx Slot	28.0	N/A	23.0	N/A	N/A	N/A	N/A	28.0
			2 Tx Slot	26.0	N/A	21.0	N/A	N/A	N/A	N/A	
			3 Tx Slot	24.0	N/A	19.0	N/A	N/A	N/A	N/A	
			4 Tx Slot	23.0	N/A	18.0	N/A	N/A	N/A	N/A	
GSM	1900	Main 1	1 Tx Slot	26.0	N/A	21.0	N/A	N/A	N/A	N/A	26.0
			2 Tx Slot	24.0	N/A	19.5	N/A	N/A	N/A	N/A	
			3 Tx Slot	23.0	N/A	18.0	N/A	N/A	N/A	N/A	
			4 Tx Slot	22.0	N/A	17.0	N/A	N/A	N/A	N/A	

Tolerance: -1.5 dB / +1.0 dB

B. UMTS Modes

RSI				Modulated Average (dBm)							Pmax (Maximum Target Power)
Mode	Band	ANT	3GPP Rel.	0	1	2	3	4	5	6	
UMTS	5	Main 1	3GPP Rel 99	Grip Sensor Off (Free)	(Grip Sensor #1)	(Grip Sensor #2)	(Grip Sensor #3)	(Grip Sensor #4)	(Grip Sensor #5)	(Grip Sensor #6)	23
			HSDPA Cat. 5	23.0	21.5	15.0	21.5	N/A	N/A	N/A	
			HSUPA Cat. 6	23.0	20.5	14.0	20.5	N/A	N/A	N/A	
			DC-HSDPA Cat. 24	23.0	19.5	13.0	19.5	N/A	N/A	N/A	
UMTS	4	Main 1	3GPP Rel 99	23.0	20.5	13.0	20.5	N/A	N/A	N/A	23
			HSDPA Cat. 5	23.0	19.5	12.0	19.5	N/A	N/A	N/A	
			HSUPA Cat. 6	23.0	18.5	11.0	18.5	N/A	N/A	N/A	
			DC-HSDPA Cat. 24	23.0	18.5	11.0	18.5	N/A	N/A	N/A	
UMTS	2	Main 1	3GPP Rel 99	23.0	19.0	12.5	19.0	N/A	N/A	N/A	23
			HSDPA Cat. 5	23.0	18.0	11.5	18.0	N/A	N/A	N/A	
			HSUPA Cat. 6	23.0	17.0	10.5	17.0	N/A	N/A	N/A	
			DC-HSDPA Cat. 24	23.0	18.0	11.5	18.0	N/A	N/A	N/A	

Tolerance: -1.5 dB / +1.0 dB

C. LTE Modes

RSI			Modulated Average (in dBm)							Pmax (Maximum Target Power)
Mode	Band	ANT	0	1	2	3	4	5	6	
LTE	2	Main 1	Grip Sensor Off (Free)	(Grip Sensor #1)	(Grip Sensor #2)	(Grip Sensor #3)	(Grip Sensor #4)	(Grip Sensor #5)	(Grip Sensor #6)	23
LTE	4	Main 1	23	18.0	12.0	18.0	N/A	N/A	N/A	23
LTE	5	Main 1	24	22.0	14.0	22.0	N/A	N/A	N/A	24
LTE	12	Main 1	23	N/A	15.0	N/A	N/A	N/A	N/A	23
LTE	13	Main 1	23	N/A	13.0	N/A	N/A	N/A	N/A	23
LTE	17	Main 1	23	N/A	15.0	N/A	N/A	N/A	N/A	23
LTE	25	Main 1	23	18.0	12.0	18.0	N/A	N/A	N/A	23
LTE	26	Main 1	23	22.0	14.0	22.0	N/A	N/A	N/A	23
LTE	41	Main 1	24	N/A	13.5	N/A	N/A	N/A	N/A	24
LTE	66	Main 1	23	18.0	12.0	18.0	N/A	N/A	N/A	23
LTE	2 FR1 ENDC combination	Sub 2	23	N/A	N/A	N/A	N/A	10.5	N/A	23
LTE	4 FR1 ENDC combination	Sub 2	23	N/A	N/A	N/A	N/A	11.0	N/A	23
LTE	66 FR1 ENDC combination	Sub 2	23	N/A	N/A	N/A	N/A	11.0	N/A	23

Tolerance: -1.5 dB / +1.0 dB

D. 5G NR SUB 6

RSI			Modulated Average (in dBm)							Pmax (Maximum Target Power)
Mode	Band	ANT	0	1	2	3	4	5	6	
			Grip Sensor Off (Free)	(Grip Sensor #1)	(Grip Sensor #2)	(Grip Sensor #3)	(Grip Sensor #4)	(Grip Sensor #5)	(Grip Sensor #6)	
NR	n5	Main 1	24	N/A	14.0	N/A	N/A	N/A	N/A	24
NR	n26	Main 1	23	22.0	14.0	22.0	N/A	N/A	N/A	23
NR	n41	Main 1	19.0 100%Duty	N/A	9.0 100%Duty	N/A	N/A	N/A	N/A	24
NR	n41 SRS#2	Sub 2	10.0 100%Duty	N/A	N/A	N/A	N/A	N/A	N/A	14
NR	n41 SRS#3	Sub 4	10.0 100%Duty	N/A	N/A	N/A	N/A	N/A	N/A	14
NR	n41 SRS#4	Sub 1	10.0 100%Duty	N/A	N/A	N/A	N/A	N/A	N/A	13
NR	n66	Main 1	23	18.0	12.0	18.0	N/A	N/A	N/A	23
NR	n71	Main 1	24.5	N/A	16.0	N/A	N/A	N/A		24.5
NR	n77 (PC2)	Main 2	19 100%Duty	N/A	N/A	N/A	9.0 100%Duty	N/A	N/A	26
NR	n77 (PC3)	Main 2	19 100%Duty	N/A	N/A	N/A	9.0 100%Duty	N/A	N/A	24.5
NR	n78 (PC2)	Main 2	19 100%Duty	N/A	N/A	N/A	9.0 100%Duty	N/A	N/A	26
NR	n78 (PC3)	Main 2	19 100%Duty	N/A	N/A	N/A	9.0 100%Duty	N/A	N/A	24.5

Tolerance: -1.5 dB / +1.0 dB

4.4.2 Maximum 2.4 GHz, 5 GHz WIFI output power

a. Maximum Power

Mode	Band	SISO (2.4GHz : ANT1 / 5GHz : ANT2)						MIMO					
		a	b	g	n	ac	ax	a	b	g	n	ac	ax
							(SU)						(SU)
2.4GHz	1-10ch		18	15	15	15	15		21	18	18	18	18
	11ch		18	12.5	12.5	12.5	12.5		21	15.5	15.5	15.5	15.5
	12ch		2	2	2	2	2		5	5	5	5	5
	13ch		0	-10	-10	-10	-10		3	-7	-7	-7	-7
5GHZ (20MHz)	UNII 1	16			16	16	16	19			19	19	19
	UNII 2A	16			16	16	16	19			19	19	19
	UNII 2C	16			16	16	16	19			19	19	19
	UNII 3	16			16	16	16	19			19	19	19
	UNII 4	16			16	16	16	19			19	19	19
5GHZ (40MHz)	UNII 1				14 ch38:12	14 ch38:12	14 ch38:12				17 ch38:15	17 ch38:15	17 ch38:15
	UNII 2A				14	14	14				17	17	17
	UNII 2C				14	14	14				17	17	17
	UNII 3				14	14	14				17	17	17
	UNII 4				14	14	14				17	17	17
5GHZ (80MHz)	UNII 1					11.5	11.5					14.5	14.5
	UNII 2A					11.5	11.5					14.5	14.5
	UNII 2C					11.5	11.5					14.5	14.5
	UNII 3					11.5	11.5					14.5	14.5
	UNII 4					11.5	11.5					14.5	14.5
Tolerance : +1dB													

b. 11ax RU Maximum Power

Tones	SISO (2.4GHz : ANT1 / 5GHz : ANT2)			
	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	11.5 (12ch:2) (13ch:-10)	8.5(100ch:6.5)	8	7
52T	11.5 (12ch:2) (13ch:-10)	8.5(100ch:6.5)	8	7
106T	11.5 (12ch:2) (13ch:-10)	8.5(100ch:6.5)	8	7
242T	11.5 (12ch:2) (13ch:-10)	8.5(100ch:6.5)	8	7
484T			8	7
996T				7
996Tx2				
996Tx4				
Tones	MIMO			
	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	14.5 (12ch:5) (13ch:-7)	11.5(100ch:9.5)	11	10
52T	14.5 (12ch:5) (13ch:-7)	11.5(100ch:9.5)	11	10
106T	14.5 (12ch:5) (13ch:-7)	11.5(100ch:9.5)	11	10
242T	14.5 (12ch:5) (13ch:-7)	11.5(100ch:9.5)	11	10
484T			11	10
996T				10
996Tx2				
996Tx4				
Tolerance : +1dB				

c. Reduced Power

Mode	Band	SISO (2.4GHz : ANT1 / 5GHz : ANT2)						MIMO					
		a	b	g	n	ac	ax (SU)	a	b	g	n	ac	ax (SU)
2.4GHz	1-10ch		10	10	10	10	10		13	13	13	13	13
	11ch		10	10	10	10	10		13	13	13	13	13
	12ch		2	2	2	2	2		5	5	5	5	5
	13ch		0	-10	-10	-10	-10		3	-7	-7	-7	-7
5GHZ (20MHz)	UNII 1	5			5	5	5	8			8	8	8
	UNII 2A	5			5	5	5	8			8	8	8
	UNII 2C	5			5	5	5	8			8	8	8
	UNII 3	5			5	5	5	8			8	8	8
	UNII 4	5			5	5	5	8			8	8	8
5GHZ (40MHz)	UNII 1				5	5	5				8	8	8
	UNII 2A				5	5	5				8	8	8
	UNII 2C				5	5	5				8	8	8
	UNII 3				5	5	5				8	8	8
	UNII 4				5	5	5				8	8	8
5GHZ (80MHz)	UNII 1					5	5					8	8
	UNII 2A					5	5					8	8
	UNII 2C					5	5					8	8
	UNII 3					5	5					8	8
	UNII 4					5	5					8	8
Tolerance : +1dB													

d. 11ax RU Reduced Power

	SISO (2.4GHz : ANT1 / 5GHz : ANT2)			
Tones	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	10(11ch:10/13ch:-10) (12ch:2)	5	5	5
52T	10(11ch:10/13ch:-10) (12ch:2)	5	5	5
106T	10(11ch:10/13ch:-10) (12ch:2)	5	5	5
242T	10(11ch:10/13ch:-10) (12ch:2)	5	5	5
484T			5	5
996T				5
996Tx2				
996Tx4				
	MIMO			
Tones	2.4G	5G/20Mhz	5G/40Mhz	5G/80Mhz
	Ch & RU index	Ch & RU index	Ch & RU index	Ch & RU index
26T	13(11ch:13/13ch:-7) (12ch:5)	8	8	8
52T	13(11ch:13/13ch:-7) (12ch:5)	8	8	8
106T	13(11ch:13/13ch:-7) (12ch:5)	8	8	8
242T	13(11ch:13/13ch:-7) (12ch:5)	8	8	8
484T			8	8
996T				8
996Tx2				
996Tx4				
Tolerance : +1dB				

e. Bluetooth Maximum and Reduced Conducted Output Power in Conducted Mode

Maximum Power

Mode	Frequency	Target power(dBm)
Bluetooth BDR (in dBm)	2402	16
	2440	
	2480	
Bluetooth EDR (in dBm)	2402	10
	2440	
	2480	
Bluetooth LE (in dBm)	2402	9
	2440	
	2480	

-Reduced Power

Mode	Frequency	Target power(dBm)
Bluetooth BDR (in dBm)	2402	12
	2440	
	2480	
Bluetooth EDR (in dBm)	2402	10
	2440	
	2480	
Bluetooth LE (in dBm)	2402	9
	2440	
	2480	

(Upper Tolerance: target ~+1.0 dB)

4.5 LTE Information

	Item.	Description
Frequency Range	LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz
	LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz
	LTE FDD Band 5 (Cell)	824.7 MHz ~ 848.3 MHz
	LTE FDD Band 12	699.7 MHz ~ 715.3 MHz
	LTE FDD Band 13	779.5 MHz ~ 784.5 MHz
	LTE FDD Band 17	706.5 MHz ~ 713.5 MHz
	LTE FDD Band 25	1 850.7 MHz ~ 1 914.3 MHz
	LTE FDD Band 26	814.7 MHz ~ 848.3 MHz
	LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz
	LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz
Channel Bandwidths	LTE FDD Band 2 (PCS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 4 (AWS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 5 (Cell)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE FDD Band 12	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	LTE FDD Band 13	5 MHz, 10 MHz
	LTE FDD Band 17	5 MHz, 10 MHz
	LTE FDD Band 25	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 26	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz
	LTE TDD Band 41	5 MHz, 10 MHz, 15 MHz, 20 MHz
	LTE FDD Band 66 (AWS)	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz

Ch. No.& Freq.(MHz)		Low / Low-Mid	Mid	Mid-High / High
LTE FDD Band 2 (PCS)	1.4 MHz	1 850.7 (18607)	1 880.0 (18900)	1 909.3 (19193)
	3 MHz	1 851.5 (18615)	1 880.0 (18900)	1 908.5 (19185)
	5 MHz	1 852.5 (18625)	1 880.0 (18900)	1 907.5 (19175)
	10 MHz	1 855.0 (18650)	1 880.0 (18900)	1 905.0 (19150)
	15 MHz	1 857.5 (18675)	1 880.0 (18900)	1 902.5 (19125)
	20 MHz	1 860.0 (18700)	1 880.0 (18900)	1 900.0 (19100)
LTE FDD Band 4 (AWS)	1.4 MHz	1 710.7 (19957)	1 732.5 (20175)	1 754.3 (20393)
	3 MHz	1 711.5 (19965)	1 732.5 (20175)	1 753.5 (20385)
	5 MHz	1 712.5 (19975)	1 732.5 (20175)	1 752.5 (20375)
	10 MHz	1 715.0 (20000)	1 732.5 (20175)	1 750.0 (20350)
	15 MHz	1 717.5 (20025)	1 732.5 (20175)	1 747.5 (20325)
	20 MHz		1 732.5 (20175)	
LTE FDD Band 5 (Cell)	1.4 MHz	824.7 (20407)	836.5 (20525)	848.3 (20643)
	3 MHz	825.5 (20415)	836.5 (20525)	847.5 (20635)
	5 MHz	826.5 (20425)	836.5 (20525)	846.5 (20625)
	10 MHz		836.5 (20525)	
LTE FDD Band 12	1.4 MHz	699.7 (23017)	707.5 (23095)	715.3 (23173)
	3 MHz	700.5 (23025)	707.5 (23095)	714.5 (23165)
	5 MHz	701.5 (23035)	707.5 (23095)	713.5 (23155)
	10 MHz		707.5 (23095)	
LTE FDD Band 13	5 MHz		782 (23230)	
	10 MHz		782 (23230)	

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High	
LTE FDD Band 17	5 MHz	706.5 (23755)		710 (23790)		713.5 (23825)	
	10 MHz			710 (23790)			
LTE FDD Band 25(PCS)	1.4 MHz	1 850.7 (26047)		1 882.5 (26365)		1 914.3 (26683)	
	3 MHz	1 851.5 (26055)		1 882.5 (26365)		1 913.5 (26675)	
	5 MHz	1 852.5 (26065)		1 882.5 (26365)		1 912.5 (26665)	
	10 MHz	1 855 (26090)		1 882.5 (26365)		1 910 (26640)	
	15 MHz	1 857.5 (26115)		1 882.5 (26365)		1 907.5 (26615)	
	20 MHz	1 860 (26140)		1 882.5 (26365)		1 905 (26590)	
LTE FDD Band 26 (Cell)	1.4 MHz	814.7 (26697)		831.5 (26865)		848.3 (27033)	
	3 MHz	815.5 (26705)		831.5 (26865)		847.5 (27025)	
	5 MHz	816.5 (26715)		831.5 (26865)		846.5 (27015)	
	10 MHz	819.0 (26740)		831.5 (26865)		844.0 (26990)	
	15 MHz			831.5 (26865)			
LTE FDD Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)		1 779.3 (132665)	
	3 MHz	1 711.5 (131987)		1 745 (132322)		1 778.5 (132657)	
	5 MHz	1 712.5 (131997)		1 745 (132322)		1 777.5 (132647)	
	10 MHz	1 715.0 (132022)		1 745 (132322)		1 775.0 (132622)	
	15 MHz	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)	
	20 MHz	1 720.0 (132072)		1 745 (132322)		1 770.0 (132572)	
LTE TDD Band 41	5 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	10 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	15 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
	20 MHz	2 506.0(39750)	2 549.5(40185)	2 593.0(40620)	2 636.5(41055)	2 680.0(41490)	
UE Category		LTE Rel. 16, DL: Category 18, UL: Category 18					
HPUE Power Class		LTE TDD 41 Power Class 3 : (Duty : 63.3%)					
Modulations Supported in UL		QPSK, 16QAM, 64QAM, 256 QAM					
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3		Yes					
A-MPR disabled for SAR Testing.		Yes					
LTE Carrier Aggregation		This device supports Inter-Band DL-link Carrier aggregations. Detailed information of Down-Link CA are included in the Technical Description document.					
LTE Release information		It supports DL carrier aggregation. All other uplink communications are identical to the release 8 specifications. The following LTE Rel.16 Features are not supported: Relay, Hetnet, Enhanced eICI, MDH, cross-carrier Scheduling, Enhanced SC-FDMA.					

4.6 5G NR SUB 6 Information

Item.	Description
Frequency Range	NR FDD Band n5
	NR FDD Band n26
	NR TDD Band n41
	NR FDD Band n66
	NR FDD Band n71
	NR TDD Band n77
	NR TDD Band n77 DoD
	NR TDD Band n78
	NR TDD Band n78 DoD
Channel Bandwidths	NR FDD Band n5
	NR FDD Band n26
	NR TDD Band n41
	NR FDD Band n66
	NR FDD Band n71
	NR TDD Band n77
	NR TDD Band n77 DoD
	NR TDD Band n78
	NR TDD Band n78 DoD

Ch. No.& Freq.(MHz)	Low / Low-Mid	Mid	Mid-High / High
NR FDD Band n5 (Cell)	5 MHz	826.5 (165300)	836.5(167300)
	10 MHz		836.5(167300)
	15 MHz		836.5(167300)
	20 MHz		836.5(167300)
NR FDD Band n26 (Cell)	5 MHz	816.5(163300)	831.5(166300)
	10 MHz	819(163800)	831.5(166300)
	15 MHz	821.5(164300)	831.5(166300)
	20 MHz		831.5(166300)
NR TDD Band n41	10 MHz	2 501.01(500202)	2 547(509400)
	15 MHz	2 503.5(500700)	2 548.26(509652)
	20 MHz	2 506.02(501204)	2 549.49(509898)
	30 MHz	2 511(502200)	2 552.01(510402)
	40 MHz	2 516.01(503202)	2 567.34(513468)
	50 MHz	2 521.02(504204)	
	60 MHz	2 526(505200)	
	70 MHz	2 531.01(506202)	
	80 MHz	2 536.02(507204)	
	90 MHz	2 541(508200)	
	100 MHz		
NR FDD Band n66	5 MHz	1 712.5(342500)	1 745(349000)
	10 MHz	1 715(343000)	1 745(349000)
	15 MHz	1 717.5(343500)	1 745(349000)
	20 MHz	1 720(344000)	1 745(349000)
NR FDD Band n71	5 MHz	665.5(133100)	680.5(136100)
	10 MHz	668(133600)	680.5(136100)
	15 MHz		680.5(136100)
	20 MHz		680.5(136100)

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)
	15 MHz	3 707.52(647168)	3 760.5(650700)	3 813.51(654234)	3 866.49(657766)	3 919.5(661300)
	20 MHz	3 710.01(647334)	3 762(650800)	3 813.99(654266)	3 866.01(657734)	3 918(661200)
	25 MHz	3 712.5(647500)	3 763.5(650900)	3 814.5(654300)	3 865.5(657700)	3 916.5(661100)
	30 MHz	3 715.02(647668)	3 765(651000)	3 815.01(654334)	3 864.99(657666)	3 915(661000)
	40 MHz	3 720(648000)	3 768(651200)	3 816(654400)	3 864(657600)	3 912(660800)
	50 MHz	3 725.01(648334)	3 782.49(652166)	3 840(656000)		3 897.51(659834)
	60 MHz	3 730.02(648668)	3 803.34(653556)			3 876.66(658444)
	70 MHz	3 735(649000)	3 804.99(654336)			3 875.01(658334)
	80 MHz	3 740.01(649334)		3 840(656000)		
	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)		
NR TDD Band n78	10 MHz	3 705(647000)		3 750(650000)		3 795(653000)
	15 MHz	3 707.5(647166)		3 750(650000)		3 792.48(652832)
	20 MHz	3 710.01(647334)		3 750(650000)		3 789.99(652666)
	25 MHz	3 712.5(647500)		3 750(650000)		3 787.5(652500)
	30 MHz	3 715(647666)		3 750(650000)		3 784.98(652332)
	40 MHz	3 720(647800)				3 780(652000)
	50 MHz	3 725.01(648334)				3 774.99(651666)
	60 MHz			3 750(650000)		
	70 MHz			3 750(650000)		
	80 MHz			3 750(650000)		
	90 MHz			3 750(650000)		
	100 MHz			3 750(650000)		
NR TDD Band n78 (DoD)	10 MHz	3 455.01(630334)		3 500.01(633334)		3 544.98(636332)
	15 MHz	3 457.5(630500)		3 500.01(633334)		3 542.49(636166)
	20 MHz	3 460.02(630668)		3 500.01(633334)		3 540(636000)
	25 MHz	3 462.99(630866)		3 500.01(633334)		3 537(635800)
	30 MHz	3 465(631000)		3 500.01(633334)		3 534.99(635666)
	40 MHz	3 470.01(631334)				3 529.98(635332)
	50 MHz	3 475.02(631668)				3 525(635000)
	60 MHz			3 500.01(633334)		
	70 MHz			3 500.01(633334)		
	80 MHz			3 500.01(633334)		
	90 MHz			3 500.01(633334)		
	100 MHz			3 500.01(633334)		

Item.	Description
NR FDD Band n5/n26/n66/n71 SCS	15 kHz
NR TDD Band n41/n77/n78 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, n5, n26, n41, n71, n66, n77, n78 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 n5	[Main1] LTE Band 2/66
LTE Anchor Bands for NR Band n66	[Main1] LTE Band 5/12/13, [Sub2] LTE Band 2
LTE Anchor Bands for NR Band n41	[Main1] LTE Band 5/12, [Sub2] LTE Band 66
LTE Anchor Bands for NR Band n77	[Main1] LTE Band 2/5/12/13/25/66
LTE Anchor Bands for NR Band n78	[Main1] LTE Band 2/4/5/12/26/41/66

4.7 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.

WWAN	BT	2.4G		5G		Scenario
	Ant. 1	Ant. 1	Ant. 2	Ant. 1	Ant. 2	
O	O	X	X	X	X	WWAN + Bluetooth Ant. 1
O	O	X	X	X	O	WWAN + Bluetooth Ant. 1+ 5GHz Wi-Fi Ant.2
O	O	X	X	O	O	WWAN + Bluetooth Ant. 1+ 5GHz Wi-Fi MIMO
O	X	O	X	X	X	WWAN + 2.4GHz Wi-Fi Ant. 1
O	X	O	O	X	X	WWAN + 2.4GHz Wi-Fi MIMO
O	X	X	X	X	O	WWAN + 5GHz Wi-Fi Ant. 2
O	X	X	X	O	O	WWAN + 5GHz Wi-Fi MIMO

Note:

1. 2.4 GHz Bluetooth and 2.4 GHz WLAN cannot transmit simultaneously.
2. 2.4 GHz WLAN and 5 GHz WLAN cannot transmit simultaneously.
3. The highest reported SAR for each exposure condition is used for SAR summation purpose.
4. Wi-Fi Hotspot is supported for 2.4 GHz/UNII-3 of 5 GHz WLAN.
5. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.
6. This device supports Bluetooth tethering

4.8 SAR Test Considerations

4.8.1 WiFi

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

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

This device supports IEEE 802.11ax with the following features:

- a) Up to 80 MHz Bandwidth only for 5 GHz
- b) Up to 20 MHz Bandwidth only for 2.4 GHz
- c) 2Tx antenna output
- d) Up to 1024 QAM is supported
- e) TDWR and Band gap channels are supported for 5 GHz

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

4.8.2 Licensed Transmitter(s)

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

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

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

This Device supports 64QAM and 256QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM and 256QAM uplink configurations were measured per section 5.1 of FCC KDB 941225 D05v02r05. SAR was not required for 64QAM or 256QAM since the highest maximum output power for 64QAM and 256QAM is ≤ 0.5 dB higher than the same configuration in QPSK and the reported SAR for QPSK configuration is ≤ 1.45 W/Kg, per section 5.2.4 for FCC 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 17 (706.5 MHz ~ 713.5MHz) is covered by LTE Band 12(699.7 MHz ~ 715.3 MHz), LTE Band 5 (824.7 MHz ~ 848.3MHz) is covered by LTE Band 26(814.7 MHz ~ 848.3 MHz), LTE Band 4 (1 710.7 MHz ~ 1 754.3MHz) is covered by LTE Band 66(1 710.7 MHz ~ 1 779.3 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 NR Band n5 (826.5 MHz ~ 846.5 MHz) is covered by n26(814.7 MHz ~ 848.3 MHz), n78(3 705 MHz ~ 3 795 MHz) is covered by n77(3 705 MHz ~ 3 795 MHz), n78 DoD(3 455.01 MHz ~ 3 544.98 MHz) is covered by n77 DoD(3 455.01 MHz ~ 3 544.98 MHz) of this model each both NR bands have the same target powers.

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

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

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

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

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

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

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

5. Introduction

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

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

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dU) 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.

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

Figure 1. SAR Mathematical Equation

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

Where:

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

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

6. Description of test equipment

6.1 SAR MEASUREMENT SETUP

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

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC with Windows XP or Windows 7 or Windows 10 or Windows 11 is working with SAR Measurement system DASY4 & DASY5 & DASY6 & DASY8 A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

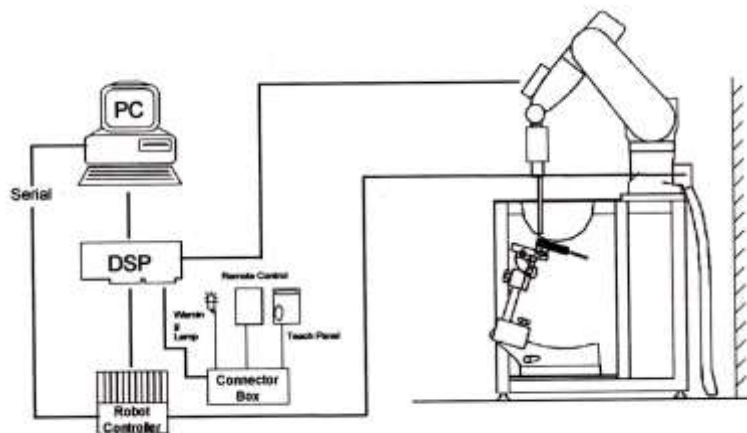


Figure 2. HCT SAR Lab. Test Measurement Set-up

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

7. SAR Measurement Procedure

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

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

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

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

8. Description of Test Position

8.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ϵ and loss tangent $\delta=0.02$.

8.2 SAR Testing for Tablet Per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configuration. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

8.3 Proximity Sensor Considerations.

This device uses a sensor to reduce output powers in certain use conditions when the device is used close the user's body.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 Section 8 and additional FCC guidance were used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm, was used as the test separation distance for SAR testing. Sensor triggering distance evaluation is provided in a separate document.

The required separation distance to evaluate SAR at full powers were:

Wireless technologies	Position	§ 6.2 Triggering Distance [mm]	§ 6.3 Coverage	§ 6.4 Tilt Angle	Worst case distance for Body SAR [mm]
Main 1 Ant (Grip #2)	Rear	22	N/A	N/A	21
	Front	23	N/A	N/A	22
	Top	27	N/A	N/A	26
Main 1 Ant (Grip #1)	Left	11	N/A	N/A	10
Main 1 Ant (Grip #3)	Right	12	N/A	N/A	11
Main 2 Ant (Grip #4)	Rear	21	N/A	N/A	20
	Front	20	N/A	N/A	19
	Bottom	26	N/A	N/A	25
	Right	11	N/A	N/A	10
Sub 2 Ant (Grip #5)	Rear	12	N/A	N/A	11
	Front	20	N/A	N/A	19
	Bottom	15	N/A	N/A	14
WIFI Ant1 (Grip #3)	Rear	20	N/A	N/A	19
	Front	19	N/A	N/A	18
	Top	23	N/A	N/A	22
	Right	12	N/A	N/A	11
Sub 3,WIFI Ant2 (Grip #1)	Rear	20	N/A	N/A	19
	Front	20	N/A	N/A	19
	Top	26	N/A	N/A	25
	Left	11	N/A	N/A	10

9. RF Exposure Limits

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

NOTES:

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

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

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

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

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

10. FCC SAR General Measurement Procedures

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

10.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as Reported SAR. The highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

10.2 3G SAR Test Reduction Procedure

10.2.1 GSM, GPRS and EDGE

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

10.2.2 SAR Test Reduction

In FCC KDB 941225 D01v03r01, certain transmission modes within a frequency Band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested

10.2.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB 941225 D01v03r01-3G SAR Measurement Procedures.

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

10.3 SAR Measurement Conditions for UMTS

10.3.1 Output Power Verification

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

10.3.2 Body SAR measurements

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

10.3.3 SAR Measurements with Rel. 5 HSDPA

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

10.3.4 SAR Measurements with Rel. 6 HSUPA

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

10.3.5 DC-HSDPA

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

DC-HSDPA Configurations

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



10.4 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

10.4.1 Spectrum Plots for RB Configurations

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

10.4.2 MPR

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

10.4.3 A-MPR

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

10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

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

configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

10.4.5 Downlink Carrier Aggregation

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

10.4.6 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 $\times (T_s) \times \text{no of S} + \text{no of U}$

Table 4.2-2: Uplink-downlink configurations.

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

Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = $(5120 \times (1/(15000 \times 2048))) \times 2 + 0.006)/0.01 = 63.33 \%$

Where

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

10.4.7 The Call Box Setup for LTE(TDD)

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

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

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

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

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

Common Parameter

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

Call Processing On Scenario Normal

Frequency

Frame Structure TDD

Channel Bandwidth FDD Hz

UL Channel & Frequency TDD 20 CH = 2593.000000 MHz

DL Channel & Frequency 40620 CH = 2593.000000 MHz

Operation Band 41

Frequency Separation (0)MHz

Level

Input Level 30.0 dBm

Parameter

Common

Physical Channel

Call Processing

TX Measurement Setup

RX Measurement Setup

Fundamental Measurement

1 2 3 4

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

Parameter Fundamental UE Report

Reference Signal not found UE Power : -21.5 dBm

Power Measurement (Meas. Count : 11/ 20)

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

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

MCS Index (-)	5	(QPSK)	(5)	(2216)	-	-
MCS Index (5)	5	(QPSK)	(5)	(1864)	4	-
MCS Index (0)	5	(QPSK)	(5)	(2216)	-	2
MCS Index (1,6)	N/A	(-----)	(--)	(-----)	-	2
CFI	3					

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

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

Special Subframe Configuration 6

Physical Channel Parameter

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

Parameter

Common

Physical Channel

Call Processing

TX Measurement Setup

RX Measurement Setup

Fundamental Measurement

1 2 3 4

10.5 SAR Testing with 802.11 Transmitters

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

10.5.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR system to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92-96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

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

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

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

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

Unless Band gap channels are permanently disabled, SAR must be considered for these channels.

10.5.4 Initial Test Position Procedure

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

10.5.5 2.4 GHz SAR test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS is that exposure configuration.
- 2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

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

10.5.6 OFDM Transmission Mode and SAR Test Channel Selection

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

10.5.7 Initial Test Configuration Procedure

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

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

10.5.8 Subsequent Test Configuration Procedures

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

11. Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D01v06.

Licensed Bands

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

Test Overview

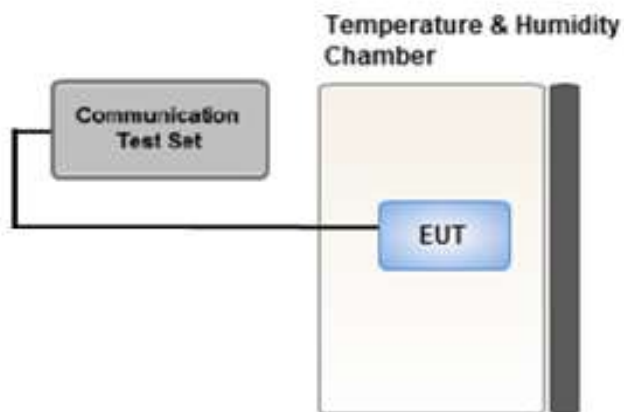
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base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

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

Test Procedure

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

Test setup



11.1 GSM Maximum Output Power

11.1.1 GSM 850 Maximum Conducted Output Power

Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		33.50	33.50	31.00	29.00	28.00	29.00	27.00	25.00	24.00
Nominal		32.50	32.50	30.00	28.00	27.00	28.00	26.00	24.00	23.00
GSM 850	128	32.59	32.61	30.50	28.99	27.66	27.68	25.71	24.04	22.93
	190	32.57	32.83	30.55	28.97	27.81	27.69	25.67	24.14	22.99
	251	32.54	32.85	30.44	28.98	27.73	27.38	25.46	23.93	22.77

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		24.47	24.47	24.98	24.74	24.99	19.97	20.98	20.74	20.99
Nominal		23.47	23.47	23.98	23.74	23.99	18.97	19.98	19.74	19.99
GSM 850	128	23.56	23.58	24.48	24.73	24.65	18.65	19.69	19.78	19.92
	190	23.54	23.80	24.53	24.71	24.80	18.66	19.65	19.88	19.98
	251	23.51	23.82	24.42	24.72	24.72	18.35	19.44	19.67	19.76

GSM Conducted output powers (Frame-Average)

Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		32.00	32.00	29.50	27.50	26.50				
Nominal		31.00	31.00	28.50	26.50	25.50				
GSM 850	128	31.45	31.51	28.41	27.20	25.19				
	190	31.25	31.31	28.15	27.16	25.11				
	251	31.21	31.20	28.01	27.02	25.03				

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		22.97	22.97	23.48	23.24	23.49				
Nominal		21.97	21.97	22.48	22.24	22.49				
GSM 850	128	22.42	22.48	22.39	22.94	22.18				
	190	22.22	22.28	22.13	22.90	22.10				
	251	22.18	22.17	21.99	22.76	22.02				

GSM Conducted output powers (Frame-Average)

Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		24.00	24.00	22.00	20.00	19.00	24.00	22.00	20.00	19.00
Nominal		23.00	23.00	21.00	19.00	18.00	23.00	21.00	19.00	18.00
GSM 850	128	23.41	23.33	20.95	19.81	18.86	23.41	20.52	18.88	17.40
	190	23.41	23.42	20.92	19.80	18.96	23.30	20.50	18.70	17.30
	251	23.43	23.28	20.87	19.39	18.97	23.07	20.45	18.37	17.16

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		14.97	14.97	15.98	15.74	15.99	14.97	15.98	15.74	15.99
Nominal		13.97	13.97	14.98	14.74	14.99	13.97	14.98	14.74	14.99
GSM 850	128	14.38	14.30	14.93	15.55	15.85	14.38	14.50	14.62	14.39
	190	14.38	14.39	14.90	15.54	15.95	14.27	14.48	14.44	14.29
	251	14.40	14.25	14.85	15.13	15.96	14.04	14.43	14.11	14.15

11.1.2 GSM 1900 Maximum Conducted Output Power

Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		30.50	30.50	28.50	27.00	26.00	27.00	25.00	24.00	23.00
Nominal		29.50	29.50	27.50	26.00	25.00	26.00	24.00	23.00	22.00
GSM 1900	512	29.44	29.32	27.33	26.66	25.37	25.36	23.13	22.10	20.80
	661	29.87	29.50	27.62	26.80	25.64	25.39	23.45	22.39	21.19
	810	29.87	29.58	27.82	26.81	25.82	25.81	23.67	22.45	21.38

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		21.47	21.47	22.48	22.74	22.99	17.97	18.98	19.74	19.99
Nominal		20.47	20.47	21.48	21.74	21.99	16.97	17.98	18.74	18.99
GSM 1900	512	20.41	20.29	21.31	22.40	22.36	16.33	17.11	17.84	17.79
	661	20.84	20.47	21.60	22.54	22.63	16.36	17.43	18.13	18.18
	810	20.84	20.55	21.80	22.55	22.81	16.78	17.65	18.19	18.37

GSM Conducted output powers (Frame-Average)

Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		28.50	28.50	26.50	25.00	24.00				
Nominal		27.50	27.50	25.50	24.00	23.00				
GSM 1900	512	27.90	27.89	25.74	24.60	23.01				
	661	27.91	27.91	25.94	24.83	23.29				
	810	27.88	28.01	25.99	24.98	23.45				

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		19.47	19.47	20.48	20.74	20.99				
Nominal		18.47	18.47	19.48	19.74	19.99				
GSM 1900	512	18.87	18.86	19.72	20.34	20.00				
	661	18.88	18.88	19.92	20.57	20.28				
	810	18.85	18.98	19.97	20.72	20.44				

GSM Conducted output powers (Frame-Average)

Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		22.00	22.00	20.50	19.00	18.00	22.00	20.50	19.00	18.00
Nominal		21.00	21.00	19.50	18.00	17.00	21.00	19.50	18.00	17.00
GSM 1900	512	21.37	21.33	18.88	18.48	16.72	21.71	19.01	17.01	16.02
	661	21.34	21.42	18.85	18.42	16.61	21.90	19.40	17.35	16.30
	810	21.36	21.49	18.89	18.46	16.69	21.99	19.78	17.52	16.60

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		12.97	12.97	14.48	14.74	14.99	12.97	14.48	14.74	14.99
Nominal		11.97	11.97	13.48	13.74	13.99	11.97	13.48	13.74	13.99
GSM 1900	512	12.34	12.30	12.86	14.22	13.71	12.68	12.99	12.75	13.01
	661	12.31	12.39	12.83	14.16	13.60	12.87	13.38	13.09	13.29
	810	12.33	12.46	12.87	14.20	13.68	12.96	13.76	13.26	13.59

Note:

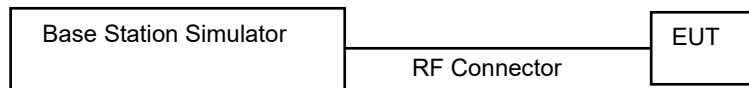
Time slot average factor is as follows:

1 Tx slot = 9.19 dB, Frame-Average output power = Burst-Average output power – 9.19 dB

2 Tx slot = 6.18 dB, Frame-Average output power = Burst-Average output power – 6.18 dB

3 Tx slot = 4.42 dB, Frame-Average output power = Burst-Average output power – 4.42 dB

4 Tx slot = 3.17 dB, Frame-Average output power = Burst-Average output power – 3.17 dB



11.2 UMTS Maximum Output Power

HSPA+

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

11.2.1 UMTS Band 5 Maximum Conducted Output Power

UMTS Band 5 Maximum Conducted Output Power

Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	23.80	23.90	23.47	-
99		12.2 kbps AMR	23.86	23.90	23.33	-
5	HSDPA	Subtest 1	23.77	23.74	23.27	0
5		Subtest 2	23.22	23.24	22.70	0
5		Subtest 3	22.71	22.70	22.22	0.5
5		Subtest 4	22.22	22.17	21.71	0.5
6	HSUPA	Subtest 1	22.68	22.68	22.20	0
6		Subtest 2	20.74	20.69	20.23	2
6		Subtest 3	22.59	22.67	22.10	1
6		Subtest 4	20.73	20.72	20.21	2
6		Subtest 5	23.72	23.71	23.19	0
8	DC-HSDPA	Subtest1	23.47	23.25	23.24	0
8		Subtest2	23.49	23.24	22.90	0
8		Subtest3	23.44	23.30	23.27	0.5
8		Subtest4	23.49	23.35	23.31	0.5

UMTS Average Conducted output powers

Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	21.57	21.47	21.08	-
99		12.2 kbps AMR	21.50	21.44	21.01	-
5	HSDPA	Subtest 1	20.83	20.71	20.15	0
5		Subtest 2	21.07	21.16	20.78	0
5		Subtest 3	20.82	20.72	20.48	0
5		Subtest 4	21.15	21.07	20.69	0
6	HSUPA	Subtest 1	19.72	19.62	19.24	0
6		Subtest 2	19.75	19.60	19.15	0
6		Subtest 3	19.70	19.62	19.22	0
6		Subtest 4	19.74	19.66	19.20	0
6		Subtest 5	20.45	20.33	20.01	0
8	DC-HSDPA	Subtest1	20.54	20.50	20.23	0
8		Subtest2	20.84	20.79	20.55	0
8		Subtest3	20.40	20.34	20.01	0
8		Subtest4	20.81	20.78	20.33	0

UMTS Average Conducted output powers

Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	15.12	15.05	14.53	-
99		12.2 kbps AMR	15.11	15.01	14.51	-
5	HSDPA	Subtest 1	14.22	14.12	13.76	0
5		Subtest 2	14.67	14.61	14.10	0
5		Subtest 3	14.98	14.23	14.53	0
5		Subtest 4	14.66	14.52	14.09	0
6	HSUPA	Subtest 1	13.21	13.10	13.10	0
6		Subtest 2	13.09	13.01	12.99	0
6		Subtest 3	13.18	13.21	13.15	0
6		Subtest 4	13.23	13.08	13.08	0
6		Subtest 5	13.91	13.89	13.83	0
8	DC-HSDPA	Subtest1	14.14	14.18	13.82	0
8		Subtest2	14.59	14.71	14.13	0
8		Subtest3	14.01	14.20	14.45	0
8		Subtest4	14.66	14.62	14.13	0

UMTS Average Conducted output powers

11.2.2 UMTS Band 4 Maximum Conducted Output Power

UMTS Band 4 Maximum Conducted Output Power

Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	23.58	23.24	23.62	-
99		12.2 kbps AMR	23.54	23.23	23.53	-
5	HSDPA	Subtest 1	23.42	23.16	23.51	0
5		Subtest 2	22.90	23.11	22.99	0
5		Subtest 3	22.40	22.10	22.44	0.5
5		Subtest 4	22.40	22.07	22.42	0.5
6	HSUPA	Subtest 1	22.38	22.04	21.78	0
6		Subtest 2	19.78	19.51	20.94	2
6		Subtest 3	22.37	22.04	22.39	1
6		Subtest 4	20.14	19.79	19.55	2
6		Subtest 5	23.37	22.99	23.41	0
8	DC-HSDPA	Subtest1	23.26	23.21	23.34	0
8		Subtest2	23.32	23.26	23.33	0
8		Subtest3	23.34	23.26	23.32	0.5
8		Subtest4	23.37	23.35	23.37	0.5

UMTS Average Conducted output powers

Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	20.63	20.41	20.58	-
99		12.2 kbps AMR	20.60	20.40	20.55	-
5	HSDPA	Subtest 1	19.80	19.51	19.75	0
5		Subtest 2	20.24	19.98	20.21	0
5		Subtest 3	20.25	20.02	20.19	0
5		Subtest 4	20.49	20.29	20.47	0
6	HSUPA	Subtest 1	18.71	18.49	18.70	0
6		Subtest 2	16.44	16.44	16.23	2
6		Subtest 3	18.62	18.43	18.61	0
6		Subtest 4	19.41	19.23	19.44	0
6		Subtest 5	18.69	18.51	18.66	0
8	DC-HSDPA	Subtest1	19.75	19.53	19.65	0
8		Subtest2	20.11	19.97	20.09	0
8		Subtest3	20.14	20.01	20.14	0
8		Subtest4	20.49	20.49	20.48	0

UMTS Average Conducted output powers

Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	12.75	12.45	12.87	-
99		12.2 kbps AMR	12.70	12.41	12.86	-
5	HSDPA	Subtest 1	12.17	11.93	11.76	0
5		Subtest 2	12.66	12.38	12.11	0
5		Subtest 3	12.97	12.36	12.30	0
5		Subtest 4	12.93	12.81	12.77	0
6	HSUPA	Subtest 1	11.16	10.91	11.05	0
6		Subtest 2	9.60	9.31	9.49	2
6		Subtest 3	11.02	10.86	10.98	0
6		Subtest 4	10.05	9.88	10.01	1
6		Subtest 5	11.11	10.99	11.03	0
8	DC-HSDPA	Subtest1	12.12	11.95	12.06	0
8		Subtest2	12.60	12.38	12.01	0
8		Subtest3	12.89	12.15	12.22	0
8		Subtest4	12.91	12.61	12.65	0

UMTS Average Conducted output powers

11.2.3 UMTS Band 2 Maximum Conducted Output Power

Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	23.30	23.48	23.44	-
99		12.2 kbps AMR	23.27	23.46	23.43	-
5	HSDPA	Subtest 1	23.22	23.39	23.36	0
5		Subtest 2	22.73	22.80	22.78	0
5		Subtest 3	22.24	22.36	22.30	0.5
5		Subtest 4	21.69	21.78	21.73	0.5
6	HSUPA	Subtest 1	22.29	22.35	22.27	0
6		Subtest 2	20.77	20.76	20.80	2
6		Subtest 3	22.22	22.32	22.25	1
6		Subtest 4	20.96	20.20	20.23	2
6		Subtest 5	23.15	23.28	23.24	0
8	DC-HSDPA	Subtest 1	23.10	23.27	23.31	0
8		Subtest2	23.11	23.20	23.30	0
8		Subtest3	23.14	23.18	23.31	0.5
8		Subtest4	23.16	23.19	23.36	0.5

UMTS Average Conducted output powers

Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	19.05	19.07	19.21	-
99		12.2 kbps AMR	19.01	19.06	19.20	-
5	HSDPA	Subtest 1	18.13	18.15	18.31	0
5		Subtest 2	18.54	18.55	18.69	0
5		Subtest 3	18.54	18.56	18.66	0
5		Subtest 4	18.51	18.58	18.40	0
6	HSUPA	Subtest 1	16.99	17.04	17.03	0
6		Subtest 2	15.40	15.45	15.53	2
6		Subtest 3	16.98	17.05	17.02	0
6		Subtest 4	16.03	16.11	16.07	0
6		Subtest 5	17.07	17.13	17.09	0
8	DC-HSDPA	Subtest 1	17.97	18.01	18.13	0
8		Subtest2	18.43	18.45	18.56	0
8		Subtest3	18.41	18.44	18.53	0
8		Subtest4	18.45	18.42	18.55	0

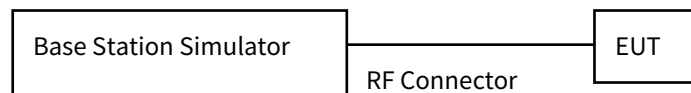
UMTS Average Conducted output powers

Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	12.45	12.52	12.56	-
99		12.2 kbps AMR	12.41	12.50	12.55	-
5	HSDPA	Subtest 1	11.56	11.64	11.71	0
5		Subtest 2	12.04	12.11	12.13	0
5		Subtest 3	12.48	12.01	12.09	0
5		Subtest 4	12.04	12.09	12.14	0
6	HSUPA	Subtest 1	10.58	10.35	10.46	0
6		Subtest 2	9.04	8.86	8.98	2
6		Subtest 3	10.52	10.31	10.43	0
6		Subtest 4	9.27	9.05	9.16	2
6		Subtest 5	10.45	10.21	10.34	0
8	DC-HSDPA	Subtest 1	11.71	11.58	11.66	0
8		Subtest2	12.19	12.15	12.08	0
8		Subtest3	12.16	11.90	12.26	0
8		Subtest4	12.09	12.17	12.15	0

UMTS Average Conducted output powers
HSDPA Configurations

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



11.3 LTE Maximum Output Power

Only the Conducted Power measurement results of the maximum bandwidth, which is the SAR test condition of LTE Bands according to FCC KDB 941225 D05v02r05, are included, and the measurement results of other bandwidths are listed in Appendix I.

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

11.3.1 LTE FDD Band 2 Maximum Conducted Output Power

LTE FDD Band 2 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1

ANT.

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.20	23.18	23.12	0	0
		1	49	23.24	23.25	23.14	0	0
		1	99	23.25	23.26	23.17	0	0
		50	0	22.30	22.27	22.21	0-1	1
		50	25	22.34	22.32	22.21	0-1	1
		50	49	22.30	22.30	22.24	0-1	1
		100	0	22.30	22.31	22.20	0-1	1
	16QAM	1	0	22.56	22.57	22.47	0-1	1
		1	49	22.45	22.53	22.38	0-1	1
		1	99	22.69	22.54	22.55	0-1	1
		50	0	21.33	21.32	21.23	0-2	2
		50	25	21.32	21.33	21.26	0-2	2
		50	49	21.36	21.32	21.21	0-2	2
		100	0	21.32	21.26	21.19	0-2	2
	64QAM	1	0	21.38	21.42	21.34	0-2	2
		1	49	21.40	21.49	21.26	0-2	2
		1	99	21.63	21.50	21.42	0-2	2
		50	0	20.31	20.24	20.18	0-3	3
		50	25	20.31	20.29	20.17	0-3	3
		50	49	20.29	20.26	20.18	0-3	3
		100	0	20.25	20.20	20.16	0-3	3
	256QAM	1	0	18.30	18.30	18.25	0-5	5
		1	49	18.32	18.27	18.23	0-5	5
		1	99	18.40	18.34	18.25	0-5	5
		50	0	18.23	18.21	18.11	0-5	5
		50	25	18.23	18.19	18.14	0-5	5
		50	49	18.24	18.21	18.10	0-5	5
		100	0	18.24	18.20	18.11	0-5	5

LTE FDD Band 2 Conducted Power _ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	17.25	17.18	17.22	0	0
		1	49	17.17	17.09	17.18	0	0
		1	99	17.24	17.17	17.22	0	0
		50	0	17.28	17.18	17.29	0-1	0
		50	25	17.29	17.23	17.30	0-1	0
		50	49	17.31	17.25	17.29	0-1	0
		100	0	17.26	17.22	17.28	0-1	0
	16QAM	1	0	17.53	17.51	17.45	0-1	0
		1	49	17.32	17.24	17.40	0-1	0
		1	99	17.61	17.45	17.58	0-1	0
		50	0	17.27	17.19	17.28	0-2	0
		50	25	17.31	17.22	17.30	0-2	0
		50	49	17.30	17.26	17.28	0-2	0
		100	0	17.27	17.23	17.28	0-2	0
	64QAM	1	0	17.42	17.29	17.39	0-2	0
		1	49	17.38	17.39	17.35	0-2	0
		1	99	17.50	17.41	17.51	0-2	0
		50	0	17.26	17.24	17.29	0-3	0
		50	25	17.30	17.23	17.28	0-3	0
		50	49	17.28	17.23	17.30	0-3	0
		100	0	17.30	17.21	17.27	0-3	0
	256QAM	1	0	17.30	17.19	17.34	0-5	0
		1	49	17.24	17.25	17.37	0-5	0
		1	99	17.43	17.34	17.44	0-5	0
		50	0	17.30	17.23	17.29	0-5	0
		50	25	17.28	17.20	17.30	0-5	0
		50	49	17.28	17.21	17.30	0-5	0
		100	0	17.29	17.25	17.28	0-5	0

LTE FDD Band 2 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	11.39	11.38	11.43	0	0
		1	49	11.39	11.30	11.43	0	0
		1	99	11.40	11.36	11.44	0	0
		50	0	11.47	11.42	11.48	0-1	0
		50	25	11.50	11.45	11.53	0-1	0
		50	49	11.50	11.41	11.48	0-1	0
		100	0	11.48	11.41	11.51	0-1	0
	16QAM	1	0	11.77	11.60	11.76	0-1	0
		1	49	11.55	11.60	11.54	0-1	0
		1	99	11.70	11.63	11.73	0-1	0
		50	0	11.44	11.40	11.45	0-2	0
		50	25	11.51	11.42	11.47	0-2	0
		50	49	11.48	11.40	11.47	0-2	0
		100	0	11.45	11.39	11.44	0-2	0
	64QAM	1	0	11.65	11.47	11.46	0-2	0
		1	49	11.54	11.48	11.57	0-2	0
		1	99	11.67	11.64	11.66	0-2	0
		50	0	11.46	11.42	11.50	0-3	0
		50	25	11.48	11.40	11.46	0-3	0
		50	49	11.50	11.42	11.48	0-3	0
		100	0	11.45	11.38	11.44	0-3	0
	256QAM	1	0	11.51	11.48	11.53	0-5	0
		1	49	11.51	11.41	11.49	0-5	0
		1	99	11.56	11.50	11.57	0-5	0
		50	0	11.47	11.41	11.47	0-5	0
		50	25	11.47	11.39	11.43	0-5	0
		50	49	11.48	11.38	11.46	0-5	0
		100	0	11.46	11.41	11.46	0-5	0

LTE FDD Band 2 (FR1 ENDC Combination) Conducted Power _ Measured Pmax, RSI = 0
(Free, Grip Sensor Off) _Sub2 ANT.

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.17	23.20	23.15	0	0
		1	49	23.03	23.15	23.08	0	0
		1	99	23.08	23.22	23.21	0	0
		50	0	22.15	22.28	22.23	0-1	1
		50	25	22.12	22.26	22.20	0-1	1
		50	49	22.11	22.24	22.21	0-1	1
		100	0	22.14	22.25	22.19	0-1	1
	16QAM	1	0	22.57	22.63	22.47	0-1	1
		1	49	22.32	22.43	22.36	0-1	1
		1	99	22.45	22.60	22.65	0-1	1
		50	0	21.15	21.29	21.24	0-2	2
		50	25	21.13	21.27	21.24	0-2	2
		50	49	21.13	21.27	21.25	0-2	2
		100	0	21.14	21.26	21.19	0-2	2
	64QAM	1	0	21.28	21.50	21.45	0-2	2
		1	49	21.28	21.40	21.38	0-2	2
		1	99	21.30	21.48	21.49	0-2	2
		50	0	20.13	20.28	20.20	0-3	3
		50	25	20.10	20.30	20.23	0-3	3
		50	49	20.15	20.26	20.22	0-3	3
		100	0	20.10	20.30	20.24	0-3	3
	256QAM	1	0	18.26	18.40	18.21	0-5	5
		1	49	18.15	18.24	18.19	0-5	5
		1	99	18.21	18.41	18.32	0-5	5
		50	0	18.15	18.26	18.19	0-5	5
		50	25	18.08	18.27	18.19	0-5	5
		50	49	18.09	18.24	18.20	0-5	5
		100	0	18.14	18.26	18.20	0-5	5

LTE FDD Band 2 (FR1 ENDC Combination) Conducted Power _ Measured RSI = 5 (GRIP 5 ON)
Sub2 ANT.

LTE FDD Band 2 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	10.01	10.07	10.14	0	0
		1	49	9.82	9.96	10.01	0	0
		1	99	10.05	10.08	10.16	0	0
		50	0	10.02	9.96	10.24	0-1	0
		50	25	9.91	10.10	10.22	0-1	0
		50	49	9.93	10.00	10.14	0-1	0
		100	0	10.04	10.13	10.05	0-1	0
	16QAM	1	0	10.19	10.17	10.24	0-1	0
		1	49	10.05	10.23	10.16	0-1	0
		1	99	10.05	10.16	10.37	0-1	0
		50	0	9.98	10.10	10.15	0-2	0
		50	25	9.98	10.03	10.22	0-2	0
		50	49	9.83	10.01	10.01	0-2	0
		100	0	9.78	9.96	10.09	0-2	0
	64QAM	1	0	10.08	10.08	10.26	0-2	0
		1	49	9.99	10.02	10.39	0-2	0
		1	99	9.84	10.06	10.21	0-2	0
		50	0	9.93	10.06	10.21	0-3	0
		50	25	9.89	10.08	10.05	0-3	0
		50	49	9.75	10.06	10.20	0-3	0
		100	0	9.99	10.00	10.15	0-3	0
	256QAM	1	0	9.98	10.39	10.06	0-5	0
		1	49	10.24	10.25	10.47	0-5	0
		1	99	10.33	10.42	10.49	0-5	0
		50	0	9.98	10.21	10.09	0-5	0
		50	25	10.11	10.29	10.41	0-5	0
		50	49	10.09	10.37	10.33	0-5	0
		100	0	10.26	10.31	10.40	0-5	0

11.3.2 LTE FDD Band 4 Maximum Conducted Output Power

LTE FDD Band 4 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1
ANT.

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 ch. 1732.5 MHz			
20 MHz	QPSK	1	0		23.03		0	0
		1	49		23.07		0	0
		1	99		23.19		0	0
		50	0		22.15		0-1	1
		50	25		22.17		0-1	1
		50	49		22.21		0-1	1
		100	0		22.19		0-1	1
	16QAM	1	0		22.43		0-1	1
		1	49		22.38		0-1	1
		1	99		22.61		0-1	1
		50	0		21.17		0-2	2
		50	25		21.18		0-2	2
		50	49		21.26		0-2	2
		100	0		21.16		0-2	2
	64QAM	1	0		21.33		0-2	2
		1	49		21.33		0-2	2
		1	99		21.51		0-2	2
		50	0		20.16		0-3	3
		50	25		20.18		0-3	3
		50	49		20.22		0-3	3
		100	0		20.20		0-3	3
	256QAM	1	0		18.23		0-5	5
		1	49		18.19		0-5	5
		1	99		18.38		0-5	5
		50	0		18.10		0-5	5
		50	25		18.13		0-5	5
		50	49		18.16		0-5	5
		100	0		18.17		0-5	5

LTE FDD Band 4 Conducted Power _ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _ Main1 ANT.

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 ch. 1732.5 MHz			
20 MHz	QPSK	1	0		17.06		0	0
		1	49		17.05		0	0
		1	99		17.14		0	0
		50	0		17.11		0-1	0
		50	25		17.12		0-1	0
		50	49		17.13		0-1	0
		100	0		17.17		0-1	0
	16QAM	1	0		17.39		0-1	0
		1	49		17.29		0-1	0
		1	99		17.52		0-1	0
		50	0		17.14		0-2	0
		50	25		17.17		0-2	0
		50	49		17.20		0-2	0
		100	0		17.18		0-2	0
	64QAM	1	0		17.35		0-2	0
		1	49		17.29		0-2	0
		1	99		17.41		0-2	0
		50	0		17.18		0-3	0
		50	25		17.17		0-3	0
		50	49		17.22		0-3	0
		100	0		17.20		0-3	0
	256QAM	1	0		17.12		0-5	0
		1	49		17.09		0-5	0
		1	99		17.27		0-5	0
		50	0		17.04		0-5	0
		50	25		17.02		0-5	0
		50	49		17.04		0-5	0
		100	0		17.06		0-5	0

LTE FDD Band 4 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 ch. 1732.5MHz			
20 MHz	QPSK	1	0		11.20		0	0
		1	49		11.22		0	0
		1	99		11.27		0	0
		50	0		11.24		0-1	0
		50	25		11.28		0-1	0
		50	49		11.28		0-1	0
		100	0		11.25		0-1	0
	16QAM	1	0		11.52		0-1	0
		1	49		11.43		0-1	0
		1	99		11.57		0-1	0
		50	0		11.23		0-2	0
		50	25		11.25		0-2	0
		50	49		11.33		0-2	0
		100	0		11.24		0-2	0
	64QAM	1	0		11.31		0-2	0
		1	49		11.27		0-2	0
		1	99		11.44		0-2	0
		50	0		11.23		0-3	0
		50	25		11.27		0-3	0
		50	49		11.27		0-3	0
		100	0		11.24		0-3	0
	256QAM	1	0		11.27		0-5	0
		1	49		11.26		0-5	0
		1	99		11.36		0-5	0
		50	0		11.22		0-5	0
		50	25		11.26		0-5	0
		50	49		11.26		0-5	0
		100	0		11.24		0-5	0

LTE FDD Band 4 (FR1 ENDC combination) Conducted Power - Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Sub2 ANT.

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 ch. 1732.5 MHz			
20 MHz	QPSK	1	0		22.96		0	0
		1	49		22.81		0	0
		1	99		22.81		0	0
		50	0		21.88		0-1	1
		50	25		21.86		0-1	1
		50	49		21.84		0-1	1
		100	0		21.87		0-1	1
	16QAM	1	0		22.25		0-1	1
		1	49		22.05		0-1	1
		1	99		22.15		0-1	1
		50	0		20.91		0-2	2
		50	25		20.89		0-2	2
		50	49		20.87		0-2	2
		100	0		20.87		0-2	2
	64QAM	1	0		21.11		0-2	2
		1	49		21.07		0-2	2
		1	99		21.09		0-2	2
		50	0		19.93		0-3	3
		50	25		19.89		0-3	3
		50	49		19.88		0-3	3
		100	0		19.92		0-3	3
	256QAM	1	0		18.07		0-5	5
		1	49		17.93		0-5	5
		1	99		17.96		0-5	5
		50	0		17.85		0-5	5
		50	25		17.89		0-5	5
		50	49		17.81		0-5	5
		100	0		17.87		0-5	5

LTE FDD Band 4 (FR1 ENDC combination) Conducted Power - Measured RSI = 5 (GRIP 5 ON)

Sub2 ANT.

LTE FDD Band 4 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20175 ch. 1732.5 MHz			
20 MHz	QPSK	1	0		10.32		0	0
		1	49		10.24		0	0
		1	99		10.35		0	0
		50	0		10.29		0-1	0
		50	25		10.46		0-1	0
		50	49		10.30		0-1	0
		100	0		10.35		0-1	0
	16QAM	1	0		10.58		0-1	0
		1	49		10.48		0-1	0
		1	99		10.68		0-1	0
		50	0		10.48		0-2	0
		50	25		10.33		0-2	0
		50	49		10.34		0-2	0
		100	0		10.47		0-2	0
	64QAM	1	0		10.45		0-2	0
		1	49		10.41		0-2	0
		1	99		10.62		0-2	0
		50	0		10.35		0-3	0
		50	25		10.36		0-3	0
		50	49		10.56		0-3	0
		100	0		10.56		0-3	0
	256QAM	1	0		10.32		0-5	0
		1	49		10.64		0-5	0
		1	99		10.23		0-5	0
		50	0		10.34		0-5	0
		50	25		10.45		0-5	0
		50	49		10.19		0-5	0
		100	0		10.52		0-5	0

11.3.3 LTE FDD Band 5 Maximum Conducted Output Power

LTE FDD Band 5 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525			
					836.5 MHz			
10 MHz	QPSK	1	0		24.17		0	0
		1	24		24.08		0	0
		1	49		24.06		0	0
		25	0		23.25		0-1	1
		25	12		23.22		0-1	1
		25	24		23.24		0-1	1
		50	0		23.27		0-1	1
	16QAM	1	0		23.47		0-1	1
		1	24		23.23		0-1	1
		1	49		23.40		0-1	1
		25	0		22.22		0-2	2
		25	12		22.21		0-2	2
		25	24		22.17		0-2	2
		50	0		22.23		0-2	2
	64QAM	1	0		22.42		0-2	2
		1	24		22.25		0-2	2
		1	49		22.34		0-2	2
		25	0		21.23		0-3	3
		25	12		21.19		0-3	3
		25	24		21.17		0-3	3
		50	0		21.22		0-3	3
	256QAM	1	0		19.29		0-5	5
		1	24		19.17		0-5	5
		1	49		19.22		0-5	5
		25	0		19.18		0-5	5
		25	12		19.17		0-5	5
		25	24		19.14		0-5	5
		50	0		19.19		0-5	5

LTE FDD Band 5 Conducted Power _ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _ Main1 ANT.

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525			
					836.5 MHz			
10 MHz	QPSK	1	0		21.64		0	0
		1	24		21.55		0	0
		1	49		21.55		0	0
		25	0		21.68		0-1	0
		25	12		21.66		0-1	0
		25	24		21.67		0-1	0
		50	0		21.71		0-1	0
	16QAM	1	0		21.95		0-1	0
		1	24		21.69		0-1	0
		1	49		21.80		0-1	0
		25	0		21.68		0-2	0
		25	12		21.68		0-2	0
		25	24		21.65		0-2	0
		50	0		21.74		0-2	0
	64QAM	1	0		21.86		0-2	0
		1	24		21.88		0-2	0
		1	49		21.83		0-2	0
		25	0		20.70		0-3	1
		25	12		20.67		0-3	1
		25	24		20.67		0-3	1
		50	0		20.67		0-3	1
	256QAM	1	0		18.76		0-5	3
		1	24		18.62		0-5	3
		1	49		18.67		0-5	3
		25	0		18.65		0-5	3
		25	12		18.62		0-5	3
		25	24		18.60		0-5	3
		50	0		18.62		0-5	3

LTE FDD Band 5 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 5 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525			
					836.5 MHz			
10 MHz	QPSK	1	0		13.72		0	0
		1	24		13.55		0	0
		1	49		13.52		0	0
		25	0		13.59		0-1	0
		25	12		13.58		0-1	0
		25	24		13.57		0-1	0
		50	0		13.59		0-1	0
	16QAM	1	0		13.95		0-1	0
		1	24		13.69		0-1	0
		1	49		14.01		0-1	0
		25	0		13.68		0-2	0
		25	12		13.63		0-2	0
		25	24		13.56		0-2	0
		50	0		13.61		0-2	0
	64QAM	1	0		13.96		0-2	0
		1	24		13.76		0-2	0
		1	49		13.81		0-2	0
		25	0		13.62		0-3	0
		25	12		13.60		0-3	0
		25	24		13.61		0-3	0
		50	0		13.59		0-3	0
	256QAM	1	0		13.83		0-5	0
		1	24		13.68		0-5	0
		1	49		13.79		0-5	0
		25	0		13.63		0-5	0
		25	12		13.57		0-5	0
		25	24		13.60		0-5	0
		50	0		13.63		0-5	0

11.3.4 LTE FDD Band 12 Maximum Conducted Output Power

LTE FDD Band 12 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)

_Main1 ANT.

LTE FDD Band 12 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0	23.57	0	0
		1	24	23.45	0	0
		1	49	23.41	0	0
		25	0	22.57	0-1	1
		25	12	22.54	0-1	1
		25	24	22.50	0-1	1
		50	0	22.60	0-1	1
	16QAM	1	0	22.74	0-1	1
		1	24	22.66	0-1	1
		1	49	22.73	0-1	1
		25	0	21.53	0-2	2
		25	12	21.51	0-2	2
		25	24	21.45	0-2	2
		50	0	21.53	0-2	2
	64QAM	1	0	21.70	0-2	2
		1	24	21.65	0-2	2
		1	49	21.61	0-2	2
		25	0	20.54	0-3	3
		25	12	20.46	0-3	3
		25	24	20.48	0-3	3
		50	0	20.51	0-3	3
	256QAM	1	0	18.61	0-5	5
		1	24	18.51	0-5	5
		1	49	18.52	0-5	5
		25	0	18.51	0-5	5
		25	12	18.47	0-5	5
		25	24	18.43	0-5	5
		50	0	18.46	0-5	5

LTE FDD Band 12 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 12 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23095 Ch. 707.5 MHz		
10 MHz	QPSK	1	0	14.90	0	0
		1	24	14.75	0	0
		1	49	14.73	0	0
		25	0	14.87	0-1	0
		25	12	14.83	0-1	0
		25	24	14.84	0-1	0
		50	0	14.89	0-1	0
	16QAM	1	0	15.21	0-1	0
		1	24	14.96	0-1	0
		1	49	15.01	0-1	0
		25	0	14.89	0-2	0
		25	12	14.83	0-2	0
		25	24	14.81	0-2	0
		50	0	14.84	0-2	0
	64QAM	1	0	15.06	0-2	0
		1	24	15.01	0-2	0
		1	49	14.91	0-2	0
		25	0	14.89	0-3	0
		25	12	14.83	0-3	0
		25	24	14.80	0-3	0
		50	0	14.89	0-3	0
	256QAM	1	0	15.06	0-5	0
		1	24	14.87	0-5	0
		1	49	14.91	0-5	0
		25	0	14.84	0-5	0
		25	12	14.82	0-5	0
		25	24	14.80	0-5	0
		50	0	14.89	0-5	0

11.3.5 LTE FDD Band 13 Maximum Conducted Output Power

LTE FDD Band 13 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)

Main1 ANT.

LTE FDD Band 13 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23230 Ch. 782 MHz		
10 MHz	QPSK	1	0	22.94	0	0
		1	24	22.85	0	0
		1	49	22.79	0	0
		25	0	22.04	0-1	1
		25	12	22.03	0-1	1
		25	24	21.97	0-1	1
		50	0	22.06	0-1	1
	16QAM	1	0	22.08	0-1	1
		1	24	22.00	0-1	1
		1	49	22.01	0-1	1
		25	0	21.03	0-2	2
		25	12	20.97	0-2	2
		25	24	20.91	0-2	2
		50	0	20.99	0-2	2
	64QAM	1	0	21.05	0-2	2
		1	24	21.05	0-2	2
		1	49	21.01	0-2	2
		25	0	19.99	0-3	3
		25	12	19.95	0-3	3
		25	24	19.89	0-3	3
		50	0	19.98	0-3	3
	256QAM	1	0	18.01	0-5	5
		1	24	17.91	0-5	5
		1	49	17.92	0-5	5
		25	0	17.94	0-5	5
		25	12	17.88	0-5	5
		25	24	17.86	0-5	5
		50	0	17.93	0-5	5

LTE FDD Band 13 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 13 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23230 Ch. 782 MHz		
10 MHz	QPSK	1	0	12.23	0	0
		1	24	12.02	0	0
		1	49	12.01	0	0
		25	0	12.17	0-1	0
		25	12	12.09	0-1	0
		25	24	12.10	0-1	0
		50	0	12.11	0-1	0
	16QAM	1	0	12.56	0-1	0
		1	24	12.33	0-1	0
		1	49	12.44	0-1	0
		25	0	12.19	0-2	0
		25	12	12.10	0-2	0
		25	24	12.07	0-2	0
		50	0	12.11	0-2	0
	64QAM	1	0	12.39	0-2	0
		1	24	12.32	0-2	0
		1	49	12.35	0-2	0
		25	0	12.15	0-3	0
		25	12	12.10	0-3	0
		25	24	12.06	0-3	0
		50	0	12.13	0-3	0
	256QAM	1	0	12.34	0-5	0
		1	24	12.25	0-5	0
		1	49	12.22	0-5	0
		25	0	12.16	0-5	0
		25	12	12.10	0-5	0
		25	24	12.07	0-5	0
		50	0	12.12	0-5	0

11.3.6 LTE FDD Band 17 Maximum Conducted Output Power

LTE FDD Band 17 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)

_Main1 ANT.

LTE FDD Band 17 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				23790 Ch. 710 MHz		
10 MHz	QPSK	1	0	23.77	0	0
		1	24	23.68	0	0
		1	49	23.61	0	0
		25	0	22.76	0-1	1
		25	12	22.76	0-1	1
		25	24	22.71	0-1	1
		50	0	22.78	0-1	1
	16QAM	1	0	22.97	0-1	1
		1	24	22.71	0-1	1
		1	49	22.87	0-1	1
		25	0	21.78	0-2	2
		25	12	21.74	0-2	2
		25	24	21.67	0-2	2
		50	0	21.75	0-2	2
	64QAM	1	0	21.83	0-2	2
		1	24	21.86	0-2	2
		1	49	21.71	0-2	2
		25	0	20.75	0-3	3
		25	12	20.69	0-3	3
		25	24	20.67	0-3	3
		50	0	20.75	0-3	3
	256QAM	1	0	18.80	0-5	5
		1	24	18.68	0-5	5
		1	49	18.71	0-5	5
		25	0	18.70	0-5	5
		25	12	18.63	0-5	5
		25	24	18.63	0-5	5
		50	0	18.68	0-5	5

LTE FDD Band 17 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 17 _ 10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				23780 Ch. 709 MHz	23790 Ch. 710 MHz	23800 Ch. 711 MHz		
10 MHz	QPSK	1	0	14.93	14.74	14.96	0	0
		1	24	14.79	14.78	14.79	0	0
		1	49	14.74	14.74	14.79	0	0
		25	0	14.93	14.90	15.01	0-1	0
		25	12	14.90	14.87	14.92	0-1	0
		25	24	14.87	14.87	14.89	0-1	0
		50	0	14.90	14.92	14.95	0-1	0
	16QAM	1	0	15.22	15.23	15.23	0-1	0
		1	24	14.97	14.89	15.06	0-1	0
		1	49	15.02	15.11	15.19	0-1	0
		25	0	14.90	14.89	14.97	0-2	0
		25	12	14.86	14.90	14.91	0-2	0
		25	24	14.83	14.84	14.90	0-2	0
		50	0	14.91	14.91	14.93	0-2	0
	64QAM	1	0	15.06	15.10	15.09	0-2	0
		1	24	14.96	15.02	15.01	0-2	0
		1	49	14.97	14.94	15.03	0-2	0
		25	0	14.89	14.92	14.93	0-3	0
		25	12	14.87	14.85	14.94	0-3	0
		25	24	14.85	14.84	14.88	0-3	0
		50	0	14.88	14.90	14.94	0-3	0
	256QAM	1	0	15.08	15.00	15.05	0-5	0
		1	24	14.88	14.86	14.90	0-5	0
		1	49	14.87	14.80	14.86	0-5	0
		25	0	14.89	14.91	14.96	0-5	0
		25	12	14.90	14.88	14.90	0-5	0
		25	24	14.81	14.81	14.88	0-5	0
		50	0	14.91	14.89	14.93	0-5	0

11.3.7 LTE FDD Band 25 Maximum Conducted Output Power

LTE FDD Band 25 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	23.22	22.95	23.13	0	0
		1	49	23.16	23.01	23.15	0	0
		1	99	23.26	23.09	23.24	0	0
		50	0	22.26	22.11	22.30	0-1	1
		50	25	22.23	22.12	22.31	0-1	1
		50	49	22.26	22.13	22.28	0-1	1
		100	0	22.26	22.13	22.29	0-1	1
	16QAM	1	0	22.64	22.31	22.54	0-1	1
		1	49	22.30	22.35	22.49	0-1	1
		1	99	22.53	22.39	22.68	0-1	1
		50	0	21.28	21.13	21.30	0-2	2
		50	25	21.25	21.12	21.28	0-2	2
		50	49	21.31	21.17	21.33	0-2	2
		100	0	21.22	21.10	21.29	0-2	2
	64QAM	1	0	21.38	21.28	21.47	0-2	2
		1	49	21.46	21.27	21.41	0-2	2
		1	99	21.53	21.29	21.53	0-2	2
		50	0	20.23	20.10	20.28	0-3	3
		50	25	20.24	20.10	20.30	0-3	3
		50	49	20.21	20.14	20.30	0-3	3
		100	0	20.21	20.07	20.26	0-3	3
	256QAM	1	0	18.28	18.15	18.33	0-5	5
		1	49	18.23	18.10	18.28	0-5	5
		1	99	18.38	18.20	18.35	0-5	5
		50	0	18.19	18.06	18.19	0-5	5
		50	25	18.22	18.07	18.21	0-5	5
		50	49	18.15	18.07	18.23	0-5	5
		100	0	18.20	18.08	18.21	0-5	5

LTE FDD Band 25 Conducted Power_ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON)_Main1 ANT.

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	17.22	17.18	17.21	0	0
		1	49	17.17	17.13	17.11	0	0
		1	99	17.21	17.21	17.21	0	0
		50	0	17.29	17.19	17.22	0-1	0
		50	25	17.30	17.25	17.23	0-1	0
		50	49	17.31	17.24	17.23	0-1	0
		100	0	17.27	17.18	17.23	0-1	0
	16QAM	1	0	17.55	17.51	17.50	0-1	0
		1	49	17.45	17.40	17.34	0-1	0
		1	99	17.58	17.48	17.48	0-1	0
		50	0	17.24	17.21	17.23	0-2	0
		50	25	17.27	17.21	17.24	0-2	0
		50	49	17.30	17.25	17.23	0-2	0
		100	0	17.28	17.21	17.20	0-2	0
	64QAM	1	0	17.44	17.35	17.36	0-2	0
		1	49	17.40	17.34	17.33	0-2	0
		1	99	17.56	17.44	17.40	0-2	0
		50	0	17.30	17.19	17.23	0-3	0
		50	25	17.27	17.22	17.23	0-3	0
		50	49	17.30	17.23	17.24	0-3	0
		100	0	17.25	17.20	17.21	0-3	0
	256QAM	1	0	17.31	17.21	17.30	0-5	0
		1	49	17.30	17.24	17.21	0-5	0
		1	99	17.45	17.28	17.33	0-5	0
		50	0	17.27	17.20	17.24	0-5	0
		50	25	17.30	17.21	17.24	0-5	0
		50	49	17.30	17.21	17.25	0-5	0
		100	0	17.30	17.23	17.26	0-5	0

LTE FDD Band 25 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

LTE FDD Band 25 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	11.37	11.36	11.36	0	0
		1	49	11.36	11.27	11.33	0	0
		1	99	11.39	11.31	11.36	0	0
		50	0	11.48	11.40	11.43	0-1	0
		50	25	11.51	11.40	11.47	0-1	0
		50	49	11.47	11.43	11.43	0-1	0
		100	0	11.49	11.40	11.42	0-1	0
	16QAM	1	0	11.74	11.52	11.61	0-1	0
		1	49	11.50	11.45	11.47	0-1	0
		1	99	11.73	11.62	11.55	0-1	0
		50	0	11.45	11.42	11.40	0-2	0
		50	25	11.48	11.40	11.39	0-2	0
		50	49	11.51	11.42	11.42	0-2	0
		100	0	11.49	11.38	11.41	0-2	0
	64QAM	1	0	11.59	11.50	11.46	0-2	0
		1	49	11.56	11.55	11.44	0-2	0
		1	99	11.65	11.52	11.59	0-2	0
		50	0	11.45	11.37	11.41	0-3	0
		50	25	11.46	11.39	11.40	0-3	0
		50	49	11.48	11.39	11.42	0-3	0
		100	0	11.43	11.38	11.42	0-3	0
	256QAM	1	0	11.50	11.46	11.43	0-5	0
		1	49	11.42	11.39	11.37	0-5	0
		1	99	11.57	11.56	11.47	0-5	0
		50	0	11.42	11.38	11.39	0-5	0
		50	25	11.45	11.41	11.42	0-5	0
		50	49	11.48	11.38	11.39	0-5	0
		100	0	11.44	11.40	11.42	0-5	0

11.3.8 LTE FDD Band 26 Maximum Conducted Output Power

LTE FDD Band 26 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)

_Main1 ANT.

LTE FDD Band 26 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0	23.39	0	0
		1	36	23.29	0	0
		1	74	23.26	0	0
		36	0	22.44	0-1	1
		36	18	22.42	0-1	1
		36	39	22.35	0-1	1
		75	0	22.44	0-1	1
	16QAM	1	0	22.73	0-1	1
		1	36	22.69	0-1	1
		1	74	22.57	0-1	1
		36	0	21.47	0-2	2
		36	18	21.38	0-2	2
		36	39	21.36	0-2	2
		75	0	21.43	0-2	2
	64QAM	1	0	21.51	0-2	2
		1	36	21.24	0-2	2
		1	74	21.50	0-2	2
		36	0	20.43	0-3	3
		36	18	20.43	0-3	3
		36	39	20.37	0-3	3
		75	0	20.39	0-3	3
	256QAM	1	0	18.55	0-5	5
		1	36	18.38	0-5	5
		1	74	18.36	0-5	5
		36	0	18.42	0-5	5
		36	18	18.37	0-5	5
		36	39	18.33	0-5	5
		75	0	18.35	0-5	5

LTE FDD Band 26 Conducted Power _ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _ Main1 ANT.

LTE FDD Band 26 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0	21.59	0	0
		1	36	21.55	0	0
		1	74	21.50	0	0
		36	0	21.68	0-1	0
		36	18	21.60	0-1	0
		36	39	21.57	0-1	0
		75	0	21.66	0-1	0
	16QAM	1	0	22.01	0-1	0
		1	36	21.85	0-1	0
		1	74	21.77	0-1	0
		36	0	21.18	0-2	1
		36	18	21.11	0-2	1
		36	39	21.07	0-2	1
		75	0	21.14	0-2	1
	64QAM	1	0	21.28	0-2	1
		1	36	20.97	0-2	1
		1	74	21.18	0-2	1
		36	0	20.16	0-3	2
		36	18	20.09	0-3	2
		36	39	20.10	0-3	2
		75	0	20.10	0-3	2
	256QAM	1	0	18.29	0-5	4
		1	36	18.03	0-5	4
		1	74	18.08	0-5	4
		36	0	18.14	0-5	4
		36	18	18.11	0-5	4
		36	39	18.05	0-5	4
		75	0	18.12	0-5	4

LTE FDD Band 26 Conducted Power _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE FDD Band 26 _ 15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0	13.64	0	0
		1	36	13.61	0	0
		1	74	13.56	0	0
		36	0	13.68	0-1	0
		36	18	13.64	0-1	0
		36	39	13.59	0-1	0
		75	0	13.60	0-1	0
	16QAM	1	0	14.08	0-1	0
		1	36	14.02	0-1	0
		1	74	13.93	0-1	0
		36	0	13.69	0-2	0
		36	18	13.66	0-2	0
		36	39	13.64	0-2	0
		75	0	13.62	0-2	0
	64QAM	1	0	14.04	0-2	0
		1	36	13.64	0-2	0
		1	74	13.77	0-2	0
		36	0	13.72	0-3	0
		36	18	13.69	0-3	0
		36	39	13.64	0-3	0
		75	0	13.62	0-3	0
	256QAM	1	0	13.86	0-5	0
		1	36	13.71	0-5	0
		1	74	13.75	0-5	0
		36	0	13.70	0-5	0
		36	18	13.68	0-5	0
		36	39	13.63	0-5	0
		75	0	13.64	0-5	0

11.3.9 LTE TDD Band 41 Maximum Conducted Output Power

LTE TDD Band 41 Conducted Power _ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)

Main1 ANT.

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	23.93	23.73	23.44	23.79	23.83	0	0
		1	49	23.88	23.70	23.40	23.71	23.82	0	0
		1	99	23.92	23.74	23.40	23.72	23.84	0	0
		50	0	22.98	22.82	22.53	22.81	22.91	0-1	1
		50	25	22.97	22.82	22.51	22.80	22.91	0-1	1
		50	49	22.97	22.80	22.48	22.78	22.89	0-1	1
		100	0	22.99	22.83	22.52	22.82	22.92	0-1	1
	16QAM	1	0	22.97	22.82	22.55	22.82	22.93	0-1	1
		1	49	22.81	22.63	22.32	22.62	22.73	0-1	1
		1	99	22.98	22.80	22.46	22.77	22.90	0-1	1
		50	0	21.91	21.85	21.56	21.84	21.94	0-2	2
		50	25	21.90	21.85	21.53	21.83	21.93	0-2	2
		50	49	21.91	21.83	21.51	21.80	21.93	0-2	2
		100	0	21.92	21.85	21.55	21.84	21.96	0-2	2
	64QAM	1	0	21.64	21.48	21.21	21.48	21.60	0-2	2
		1	49	21.61	21.45	21.13	21.43	21.56	0-2	2
		1	99	21.66	21.48	21.14	21.45	21.58	0-2	2
		50	0	20.92	20.86	20.57	20.86	20.97	0-3	3
		50	25	20.91	20.85	20.54	20.83	20.94	0-3	3
		50	49	20.91	20.84	20.52	20.81	20.93	0-3	3
		100	0	20.97	20.81	20.51	20.79	20.91	0-3	3
	256QAM	1	0	18.75	18.59	18.32	18.61	18.71	0-5	5
		1	49	18.67	18.50	18.21	18.50	18.62	0-5	5
		1	99	18.75	18.57	18.23	18.56	18.69	0-5	5
		50	0	18.97	18.82	18.54	18.83	18.94	0-5	5
		50	25	18.97	18.81	18.50	18.81	18.92	0-5	5
		50	49	18.96	18.80	18.48	18.79	18.91	0-5	5
		100	0	18.92	18.78	18.47	18.78	18.89	0-5	5

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

LTE TDD Band 41 Conducted Power (Power Class 3) _ Measured RSI = 2 (GRIP 2 ON) _ Main1 ANT.

LTE TDD Band 41 _ 20 MHz Bandwidth Conducted Power

Band width	Modulation	RB Size	RB Offset	Max. Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506.0 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593.0 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680.0 MHz		
20 MHz	QPSK	1	0	13.95	14.24	14.04	13.51	13.20	0	0
		1	49	14.05	14.19	13.95	13.25	12.83	0	0
		1	99	14.22	13.92	13.52	12.73	12.95	0	0
		50	0	13.80	14.25	13.52	13.40	13.10	0-1	0
		50	25	14.04	14.20	13.93	13.24	12.84	0-1	0
		50	49	14.16	14.10	13.77	13.02	12.57	0-1	0
		100	0	13.99	14.17	13.89	13.21	12.78	0-1	0
	16QAM	1	0	13.40	14.21	13.95	13.44	13.18	0-1	0
		1	49	14.02	14.17	13.90	13.21	12.82	0-1	0
		1	99	14.21	13.90	13.50	12.72	12.94	0-1	0
		50	0	13.79	14.25	14.00	13.39	13.09	0-2	0
		50	25	14.04	14.19	13.93	13.23	12.83	0-2	0
		50	49	14.16	14.09	13.77	13.01	12.56	0-2	0
		100	0	13.99	14.19	13.90	13.22	12.80	0-2	0
	64QAM	1	0	13.09	13.91	13.65	13.14	12.88	0-2	0
		1	49	13.71	13.87	13.60	12.91	12.51	0-2	0
		1	99	13.89	13.59	13.19	12.89	12.62	0-2	0
		50	0	13.81	14.28	14.02	13.42	13.12	0-3	0
		50	25	14.05	14.22	13.95	13.26	12.86	0-3	0
		50	49	14.17	14.12	13.79	13.04	12.59	0-3	0
		100	0	13.98	14.18	13.88	13.19	12.77	0-3	0
	256QAM	1	0	13.71	13.90	13.80	13.35	13.10	0-5	0
		1	49	13.62	13.77	13.69	13.22	12.98	0-5	0
		1	99	13.65	13.78	13.70	13.23	12.98	0-5	0
		50	0	13.95	14.12	14.03	13.58	13.34	0-5	0
		50	25	13.93	14.09	14.00	13.54	13.29	0-5	0
		50	49	13.91	14.05	13.97	13.50	13.26	0-5	0
		100	0	13.88	14.05	13.96	13.51	13.27	0-5	0

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

11.3.10 LTE FDD Band 66 Maximum Conducted Output Power

LTE FDD Band 66 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	22.73	23.05	23.24	0	0
		1	49	22.73	23.16	23.34	0	0
		1	99	22.88	23.26	23.45	0	0
		50	0	21.78	22.19	22.37	0-1	1
		50	25	21.82	22.22	22.43	0-1	1
		50	49	21.83	22.22	22.44	0-1	1
		100	0	21.81	22.21	22.44	0-1	1
	16QAM	1	0	22.01	22.55	22.53	0-1	1
		1	49	21.92	22.45	22.56	0-1	1
		1	99	22.14	22.57	22.58	0-1	1
		50	0	20.84	21.22	21.47	0-2	2
		50	25	20.85	21.28	21.47	0-2	2
		50	49	20.86	21.29	21.52	0-2	2
		100	0	20.83	21.24	21.47	0-2	2
	64QAM	1	0	20.95	21.31	21.51	0-2	2
		1	49	21.11	21.30	21.51	0-2	2
		1	99	21.16	21.58	21.53	0-2	2
		50	0	19.84	20.27	20.43	0-3	3
		50	25	19.83	20.28	20.48	0-3	3
		50	49	19.88	20.30	20.50	0-3	3
		100	0	19.82	20.24	20.46	0-3	3
	256QAM	1	0	17.80	18.30	18.45	0-5	5
		1	49	17.81	18.26	18.49	0-5	5
		1	99	17.98	18.40	18.51	0-5	5
		50	0	17.76	18.20	18.36	0-5	5
		50	25	17.76	18.18	18.39	0-5	5
		50	49	17.77	18.22	18.39	0-5	5
		100	0	17.77	18.22	18.42	0-5	5

LTE FDD Band 66 Conducted Power_ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	17.36	17.12	17.45	0	0
		1	49	17.36	17.18	17.42	0	0
		1	99	17.42	17.23	17.51	0	0
		50	0	17.41	17.24	17.49	0-1	0
		50	25	17.46	17.26	17.50	0-1	0
		50	49	17.43	17.24	17.53	0-1	0
		100	0	17.47	17.27	17.50	0-1	0
	16QAM	1	0	17.80	17.45	17.73	0-1	0
		1	49	17.57	17.32	17.56	0-1	0
		1	99	17.75	17.57	17.85	0-1	0
		50	0	17.46	17.25	17.48	0-2	0
		50	25	17.46	17.26	17.53	0-2	0
		50	49	17.48	17.28	17.57	0-2	0
		100	0	17.46	17.23	17.51	0-2	0
	64QAM	1	0	17.60	17.25	17.66	0-2	0
		1	49	17.61	17.33	17.58	0-2	0
		1	99	17.66	17.47	17.74	0-2	0
		50	0	17.46	17.23	17.50	0-3	0
		50	25	17.44	17.26	17.53	0-3	0
		50	49	17.48	17.30	17.53	0-3	0
		100	0	17.45	17.26	17.51	0-3	0
	256QAM	1	0	17.51	17.27	17.48	0-5	0
		1	49	17.43	17.26	17.55	0-5	0
		1	99	17.64	17.43	17.67	0-5	0
		50	0	17.43	17.26	17.47	0-5	0
		50	25	17.46	17.24	17.50	0-5	0
		50	49	17.47	17.28	17.53	0-5	0
		100	0	17.50	17.27	17.54	0-5	0

LTE FDD Band 66 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	11.25	11.09	11.32	0	0
		1	49	11.23	11.08	11.32	0	0
		1	99	11.36	11.15	11.37	0	0
		50	0	11.33	11.16	11.40	0-1	0
		50	25	11.37	11.16	11.43	0-1	0
		50	49	11.38	11.19	11.41	0-1	0
		100	0	11.36	11.17	11.44	0-1	0
	16QAM	1	0	11.47	11.44	11.63	0-1	0
		1	49	11.47	11.25	11.49	0-1	0
		1	99	11.63	11.51	11.66	0-1	0
		50	0	11.30	11.14	11.37	0-2	0
		50	25	11.36	11.17	11.40	0-2	0
		50	49	11.38	11.22	11.45	0-2	0
		100	0	11.34	11.15	11.43	0-2	0
	64QAM	1	0	11.38	11.23	11.49	0-2	0
		1	49	11.44	11.29	11.47	0-2	0
		1	99	11.55	11.38	11.60	0-2	0
		50	0	11.36	11.13	11.38	0-3	0
		50	25	11.34	11.17	11.41	0-3	0
		50	49	11.37	11.20	11.46	0-3	0
		100	0	11.38	11.16	11.38	0-3	0
	256QAM	1	0	11.33	11.21	12.48	0-5	0
		1	49	11.32	11.14	11.35	0-5	0
		1	99	11.46	11.25	11.54	0-5	0
		50	0	11.31	11.13	11.35	0-5	0
		50	25	11.32	11.14	11.38	0-5	0
		50	49	11.35	11.21	11.46	0-5	0
		100	0	11.37	11.15	11.40	0-5	0

LTE FDD Band 66 (FR1 ENDC Combination) Conducted Power_ Measured Pmax, RSI = 0
(Free, Grip Sensor Off) _Sub2 ANT.

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.28	23.41	23.58	0	0
		1	49	23.13	23.26	23.48	0	0
		1	99	23.12	23.30	23.47	0	0
		50	0	22.21	22.41	22.54	0-1	1
		50	25	22.19	22.38	22.53	0-1	1
		50	49	22.15	22.35	22.54	0-1	1
		100	0	22.20	22.40	22.57	0-1	1
	16QAM	1	0	22.58	22.82	22.96	0-1	1
		1	49	22.30	22.43	22.75	0-1	1
		1	99	22.48	22.68	22.79	0-1	1
		50	0	21.21	21.41	21.58	0-2	2
		50	25	21.23	21.40	21.62	0-2	2
		50	49	21.20	21.38	21.54	0-2	2
		100	0	21.19	21.42	21.57	0-2	2
	64QAM	1	0	21.43	21.63	21.79	0-2	2
		1	49	21.34	21.51	21.72	0-2	2
		1	99	21.41	21.46	21.72	0-2	2
		50	0	20.25	20.45	20.63	0-3	3
		50	25	20.22	20.39	20.58	0-3	3
		50	49	20.20	20.43	20.58	0-3	3
		100	0	20.21	20.40	20.57	0-3	3
	256QAM	1	0	18.35	18.52	18.70	0-5	5
		1	49	18.20	18.38	18.60	0-5	5
		1	99	18.29	18.43	18.65	0-5	5
		50	0	18.24	18.37	18.58	0-5	5
		50	25	18.17	18.33	18.56	0-5	5
		50	49	18.16	18.32	18.57	0-5	5
		100	0	18.22	18.40	18.59	0-5	5

LTE FDD Band 66 (FR1 ENDC Combination) Conducted Power _ Measured RSI = 5 (GRIP 5 ON) _Sub2 ANT.

LTE FDD Band 66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	11.05	10.83	10.86	0	0
		1	49	10.70	10.74	10.77	0	0
		1	99	10.78	10.83	10.78	0	0
		50	0	11.13	10.87	10.97	0-1	0
		50	25	10.93	10.72	10.77	0-1	0
		50	49	10.89	10.86	10.95	0-1	0
		100	0	11.00	10.89	11.06	0-1	0
	16QAM	1	0	11.30	10.99	11.01	0-1	0
		1	49	11.23	10.88	10.87	0-1	0
		1	99	11.13	11.06	11.17	0-1	0
		50	0	11.14	10.82	11.00	0-2	0
		50	25	11.11	10.80	10.98	0-2	0
		50	49	11.08	10.91	10.90	0-2	0
		100	0	10.88	10.86	11.03	0-2	0
	64QAM	1	0	11.34	11.07	11.04	0-2	0
		1	49	10.98	10.84	10.92	0-2	0
		1	99	11.04	10.92	11.07	0-2	0
		50	0	11.01	10.70	10.98	0-3	0
		50	25	11.00	10.69	10.74	0-3	0
		50	49	10.93	10.83	10.81	0-3	0
		100	0	11.02	10.78	10.82	0-3	0
	256QAM	1	0	11.14	10.91	10.90	0-5	0
		1	49	11.03	10.88	10.96	0-5	0
		1	99	10.96	10.96	10.81	0-5	0
		50	0	11.21	10.90	10.90	0-5	0
		50	25	10.97	10.86	10.80	0-5	0
		50	49	10.93	10.79	10.93	0-5	0
		100	0	11.00	10.72	10.80	0-5	0

11.4 NR Maximum Output Power

Only the Conducted Power measurement results of the maximum bandwidth, which is the SAR test condition of NR Bands according to FCC KDB 941225 D05v02r05, are included, and the measurement results of other bandwidths are listed in Appendix K.

11.4.1. NR FDD Band n5 Maximum Conducted Power

NR FDD Band n5 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	24.10	0
				1	53	24.25	0
				1	104	23.44	0
				50	0	23.71	0.5
				50	28	24.13	0
				50	56	23.36	0.5
			QPSK	100	0	23.64	0.5
				1	1	24.14	0
				1	53	24.10	0
				1	104	23.42	0
				50	0	23.21	1
				50	28	24.12	0
				50	56	22.86	1
				100	0	23.15	1
			16QAM	1	1	23.15	1
			64QAM	1	1	21.72	2.5
			256QAM	1	1	19.71	4.5
		CP	QPSK	1	1	22.68	1.5

NR FDD Band n5 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	14.02	0
				1	53	13.89	0
				1	104	13.58	0
				50	0	13.99	0
				50	28	13.91	0
				50	56	13.73	0
				100	0	13.93	0
			QPSK	1	1	14.00	0
				1	53	14.03	0
				1	104	13.56	0
				50	0	13.99	0
				50	28	13.94	0
				50	56	13.71	0
				100	0	13.95	0
			16QAM	1	1	14.03	0
			64QAM	1	1	13.97	0
			256QAM	1	1	13.92	0
		CP	QPSK	1	1	13.98	0

11.4.2. NR FDD Band n26 Maximum Conducted Power

NR FDD Band n26 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)
Main1 ANT.

NR FDD Band n26_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						166300	
						831.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.37	0
				1	53	23.66	0
				1	104	23.18	0
				50	0	23.00	0.5
				50	28	23.53	0
				50	56	22.98	0.5
				100	0	23.03	0.5
			QPSK	1	1	23.42	0
				1	53	23.35	0
				1	104	23.19	0
				50	0	22.50	1
				50	28	23.54	0
				50	56	22.49	1
				100	0	22.53	1
			16QAM	1	1	22.43	1
			64QAM	1	1	20.96	2.5
			256QAM	1	1	18.93	4.5
		CP	QPSK	1	1	21.84	1.5

NR FDD Band n26 Conducted Power_ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

NR FDD Band n26_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						166300	
						831.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	21.89	0
				1	53	21.96	0
				1	104	21.61	0
				50	0	21.89	0
				50	28	21.85	0
				50	56	21.80	0
				100	0	21.89	0
			QPSK	1	1	21.88	0
				1	53	21.91	0
				1	104	21.62	0
				50	0	21.90	0
				50	28	21.88	0
				50	56	21.81	0
				100	0	21.88	0
			16QAM	1	1	21.89	0
			64QAM	1	1	21.11	1
			256QAM	1	1	18.97	3
		CP	QPSK	1	1	21.92	0

NR FDD Band n26 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

NR FDD Band n26_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						166300	
						831.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	13.93	0
				1	53	13.98	0
				1	104	13.61	0
				50	0	13.93	0
				50	28	13.88	0
				50	56	13.79	0
				100	0	13.87	0
			QPSK	1	1	13.92	0
				1	53	13.90	0
				1	104	13.64	0
				50	0	13.91	0
				50	28	13.88	0
				50	56	13.82	0
				100	0	13.89	0
			16QAM	1	1	14.00	0
			64QAM	1	1	13.91	0
			256QAM	1	1	13.99	0
		CP	QPSK	1	1	13.92	0

11.4.3. NR TDD Band n41 Maximum Conducted Power

NR TDD Band n41 Conducted Power_ Measured RSI = 0 (Free, Grip Sensor Off) _Main1 ANT.

NR TDD Band n41 _100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1			19.27		0
				1	137			19.12		0
				1	271			19.48		0
				135	0			19.01		0
				135	69			19.15		0
				135	138			19.10		0
				270	0			19.06		0
			QPSK	1	1			19.29		0
				1	137			19.17		0
				1	271			19.45		0
				135	0			19.02		0
				135	69			19.11		0
				135	138			19.12		0
				270	0			19.07		0
			16QAM	1	1			19.28		0
			64QAM	1	1			19.25		0
			256QAM	1	1			19.33		0
		CP	QPSK	1	1			19.27		0

NR TDD Band n41 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

NR TDD Band n41 _100 Mhz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100MHz	30	DFT-s	pi/2 BPSK	1	1			8.99		0
				1	137			8.92		0
				1	271			8.56		0
				135	0			8.97		0
				135	69			8.90		0
				135	138			8.62		0
				270	0			8.88		0
			QPSK	1	1			8.95		0
				1	137			8.87		0
				1	271			8.54		0
				135	0			8.99		0
				135	69			8.91		0
				135	138			8.61		0
				270	0			8.88		0
			16QAM	1	1			9.08		0
			64QAM	1	1			8.97		0
			256QAM	1	1			8.94		0
		CP	QPSK	1	1			8.96		0

NR TDD Band n41 Conducted Power_ Measured Pmax_Main1 ANT.

NR TDD Band n41 _100 Mhz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)				MPR [dB]
								518598		
								2592.99 MHz		
100MHz	30	DFT-s	pi/2 BPSK	1	1			24.31		0
				1	137			24.23		0
				1	271			24.44		0
				135	0			23.61		0.5
				135	69			24.22		0
				135	138			23.71		0.5
				270	0			23.68		0.5
			QPSK	1	1			24.35		0
				1	137			24.27		0
				1	271			24.45		0
				135	0			23.13		1
				135	69			24.24		0
				135	138			23.22		1
				270	0			23.16		1
			16QAM	1	1			23.31		1
			64QAM	1	1			21.94		2.5
			256QAM	1	1			19.78		4.5
		CP	QPSK	1	1			22.81		1.5

11.4.4. NR FDD Band n66 Maximum Conducted Power

NR FDD Band n66 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)
Main1 ANT.

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.93	23.34	23.33	0
				1	53	23.77	23.65	23.60	0
				1	104	23.63	23.67	23.49	0
				50	0	23.45	23.03	22.91	0.5
				50	28	23.74	23.64	23.50	0
				50	56	23.15	23.21	23.06	0.5
				100	0	23.29	23.13	23.01	0.5
			QPSK	1	1	23.92	23.41	23.43	0
				1	53	23.74	23.67	23.57	0
				1	104	23.68	23.72	23.57	0
				50	0	22.90	22.56	22.42	1
				50	28	23.78	23.64	23.52	0
				50	56	22.69	22.72	22.58	1
				100	0	22.80	22.64	22.49	1
			16QAM	1	1	22.98	22.39	22.54	1
			64QAM	1	1	21.48	20.82	20.92	2.5
			256QAM	1	1	19.48	18.71	18.78	4.5
		CP	QPSK	1	1	22.45	21.85	21.84	1.5

NR FDD Band n66 Conducted Power_ Measured RSI = 1, 3 (GRIP 1, GRIP 3 ON) _Main1 ANT.

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	17.67	17.95	17.57	0
				1	53	17.75	17.90	17.64	0
				1	104	17.88	17.75	17.51	0
				50	0	17.70	17.94	17.58	0
				50	28	17.75	17.87	17.58	0
				50	56	17.80	17.79	17.56	0
				100	0	17.74	17.90	17.56	0
			QPSK	1	1	17.76	17.95	17.65	0
				1	53	17.83	17.83	17.57	0
				1	104	17.93	17.74	17.58	0
				50	0	17.75	17.93	17.58	0
				50	28	17.73	17.87	17.56	0
				50	56	17.81	17.82	17.59	0
				100	0	17.75	17.86	17.55	0
			16QAM	1	1	17.54	17.89	17.58	0
			64QAM	1	1	17.66	17.90	17.70	0
			256QAM	1	1	17.57	17.99	17.54	0
		CP	QPSK	1	1	17.71	18.03	17.59	0

NR FDD Band n66 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	11.59	11.86	11.48	0
				1	53	11.68	11.83	11.55	0
				1	104	11.80	11.60	11.43	0
				50	0	11.59	11.80	11.49	0
				50	28	11.67	11.75	11.46	0
				50	56	11.67	11.71	11.46	0
				100	0	11.61	11.77	11.49	0
			QPSK	1	1	11.62	11.90	11.49	0
				1	53	11.67	11.74	11.45	0
				1	104	11.82	11.70	11.47	0
				50	0	11.62	11.85	11.44	0
				50	28	11.65	11.76	11.45	0
				50	56	11.68	11.73	11.48	0
				100	0	11.63	11.76	11.48	0
			16QAM	1	1	11.55	11.79	11.63	0
			64QAM	1	1	11.59	12.10	11.45	0
			256QAM	1	1	11.57	11.85	11.48	0
		CP	QPSK	1	1	11.61	11.86	11.55	0

11.4.5. NR FDD Band n71 Maximum Conducted Power

NR FDD Band n71 Conducted Power_ Measured Pmax, RSI = 0 (Free, Grip Sensor Off)
Main1 ANT.

NR FDD Band n71 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						136100	
						680.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.87	0
				1	53	24.41	0
				1	104	24.11	0
				50	0	23.63	0.5
				50	28	24.27	0
				50	56	23.79	0.5
				100	0	23.79	0.5
			QPSK	1	1	23.93	0
				1	53	24.33	0
				1	104	24.16	0
				50	0	23.16	1
				50	28	24.31	0
				50	56	23.28	1
				100	0	23.27	1
			16QAM	1	1	23.01	1
			64QAM	1	1	21.53	2.5
			256QAM	1	1	19.44	4.5
		CP	QPSK	1	1	22.39	1.5

NR FDD Band n71 Conducted Power_ Measured RSI = 2 (GRIP 2 ON) _Main1 ANT.

NR FDD Band n71 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						136100	
						680.5 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	15.25	0
				1	53	15.57	0
				1	104	15.54	0
				50	0	15.34	0
				50	28	15.40	0
				50	56	15.51	0
				100	0	15.38	0
			QPSK	1	1	15.32	0
				1	53	15.42	0
				1	104	15.56	0
				50	0	15.40	0
				50	28	15.42	0
				50	56	15.55	0
				100	0	15.37	0
			16QAM	1	1	15.36	0
			64QAM	1	1	15.40	0
			256QAM	1	1	15.10	0
		CP	QPSK	1	1	15.33	0

11.4.6. NR TDD Band n77 Maximum Conducted Power

NR TDD Band n77 Conducted Power_ Measured RSI = 4 (GRIP 4 ON) _Main2 ANT.

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	8.46				8.49	0
				1	137	9.12				9.09	0
				1	271	8.72				9.47	0
				135	0	8.96				8.53	0
				135	69	9.15				8.50	0
				135	138	8.80				9.24	0
				270	0	8.56				9.06	0
			QPSK	1	1	8.68				8.45	0
				1	137	9.14				9.04	0
				1	271	8.74				9.41	0
				135	0	8.77				8.75	0
				135	69	9.14				9.07	0
				135	138	8.81				9.26	0
				270	0	9.12				9.04	0
			16QAM	1	1	8.27				8.92	0
			64QAM	1	1	8.49				8.33	0
			256QAM	1	1	8.37				8.43	0
		CP	QPSK	1	1	8.48				8.51	0

NR TDD Band n77 Conducted Power_ Measured Pmax_Main2 ANT.

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	
						3 750 MHz				3 930 MHz	
100MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	24.26				24.30	0
				1	137	24.92				24.93	0
				1	271	24.52				25.24	0
				135	0	24.10				24.20	0.5
				135	69	24.97				24.86	0
				135	138	24.14				24.57	0.5
				270	0	24.45				24.83	0.5
			QPSK	1	1	24.24				24.23	0
				1	137	24.99				24.90	0
				1	271	24.53				25.22	0
				135	0	23.62				23.57	1
				135	69	24.97				24.86	0
				135	138	23.64				24.04	1
				270	0	23.96				23.85	1
			16QAM	1	1	23.04				23.07	1
			64QAM	1	1	21.70				21.74	2.5
			256QAM	1	1	19.67				19.72	4.5
		CP	QPSK	1	1	22.77				22.77	1.5

NR TDD Band n77 Conducted Power_ Measured RSI = 0 (Free, Grip Sensor Off) _Main2 ANT.

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	
						3 750 MHz				3 930 MHz	
100MHz	30	DFT-s OFDM	pi/2 BPSK	1	1	18.53				18.56	0
				1	137	19.05				19.21	0
				1	271	18.82				19.57	0
				135	0	18.85				18.80	0
				135	69	19.21				19.14	0
				135	138	18.89				19.31	0
				270	0	19.18				19.13	0
			QPSK	1	1	18.51				18.51	0
				1	137	19.23				19.14	0
				1	271	18.80				19.51	0
				135	0	18.87				18.82	0
				135	69	19.23				19.14	0
				135	138	18.88				19.31	0
				270	0	19.20				19.12	0
			16QAM	1	1	18.54				18.43	0
			64QAM	1	1	18.58				18.39	0
			256QAM	1	1	18.54				18.53	0
		CP	QPSK	1	1	18.54				18.17	0

11.4.7. NR TDD Band n77 DoD Maximum Conducted Power

NR TDD Band n77 DoD Conducted Power_ Measured RSI = 4 (GRIP 4 ON) _Main2 ANT.

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		
100MHz	30	DFT-s	pi/2 BPSK	1	1		3500.01 MHz		0
				1	137		9.37		0
				1	271		9.32		0
				1	271		8.76		0
				135	0		9.04		0
				135	69		9.16		0
				135	138		8.54		0
				270	0		9.27		0
			QPSK	1	1		9.33		0
				1	137		9.29		0
				1	271		8.76		0
				135	0		9.40		0
				135	69		9.31		0
				135	138		8.86		0
				270	0		9.27		0
			16QAM	1	1		9.31		0
			64QAM	1	1		9.37		0
			256QAM	1	1		9.38		0
		CP	QPSK	1	1		9.41		0

NR TDD Band n77 DoD Conducted Power_ Measured Pmax_Main2 ANT.

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		25.21		0
				1	137		25.16		0
				1	271		24.60		0
				135	0		24.74		0.5
				135	69		25.14		0
				135	138		24.21		0.5
				270	0		24.61		0.5
			QPSK	1	1		25.21		0
				1	137		25.18		0
				1	271		24.61		0
				135	0		24.24		1
				135	69		25.15		0
				135	138		23.71		1
				270	0		24.11		1
			16QAM	1	1		24.23		1
			64QAM	1	1		22.73		2.5
			256QAM	1	1		20.66		4.5
		CP	QPSK	1	1		23.75		1.5

NR TDD Band n77 DoD Conducted Power_ Measured RSI = 0 (Free, Grip Sensor Off) _Main2 ANT.

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		
100 MHz	30	DFT-s	pi/2 BPSK	1	1		3500.01 MHz		0
				1	137		19.45		0
				1	271		19.23		0
				1	271		18.85		0
				135	0		19.47		0
				135	69		19.39		0
				135	138		18.93		0
				270	0		19.33		0
			QPSK	1	1		19.46		0
				1	137		19.39		0
				1	271		18.83		0
				135	0		19.47		0
				135	69		19.38		0
				135	138		18.93		0
				270	0		19.33		0
			16QAM	1	1		19.34		0
			64QAM	1	1		19.50		0
			256QAM	1	1		19.27		0
		CP	QPSK	1	1		18.28		0

11.4.7. NR TDD Band n78 Maximum Conducted Power

NR TDD Band n78 Conducted Power_ Measured RSI = 4 (GRIP 4 ON) _Main2 ANT.

NR TDD Band n78 _100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							650000		
							3750 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1		8.41		0
				1	137		8.32		0
				1	271		8.71		0
				135	0		8.78		0
				135	69		8.46		0
				135	138		8.78		0
				270	0		9.12		0
			QPSK	1	1		8.41		0
				1	137		9.11		0
				1	271		8.67		0
				135	0		8.72		0
				135	69		9.13		0
				135	138		8.77		0
				270	0		9.10		0
			16QAM	1	1		8.44		0
			64QAM	1	1		8.37		0
			256QAM	1	1		8.40		0
		CP	QPSK	1	1		8.47		0

NR TDD Band n78 Conducted Power_ Measured Pmax_Main2 ANT.

NR TDD Band n78 _100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							650000		
100MHz	30	DFT-s	pi/2 BPSK	1	1		3750 MHz		
				1	137		24.24		0
				1	271		24.97		0
				1	271		24.54		0
				135	0		24.11		0.5
				135	69		25.00		0
				135	138		24.14		0.5
				270	0		24.46		0.5
			QPSK	1	1		24.25		0
				1	137		24.99		0
				1	271		24.54		0
				135	0		23.63		1
				135	69		24.98		0
				135	138		23.65		1
				270	0		23.96		1
			16QAM	1	1		23.25		1
			64QAM	1	1		21.94		2.5
			256QAM	1	1		19.78		4.5
		CP	QPSK	1	1		22.88		1.5

NR TDD Band n78 Conducted Power_ Measured RSI = 0 (Free, Grip Sensor Off) _Main2 ANT.

NR TDD Band n78 _100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power (dBm)			MPR [dB]
							650000		
100MHz	30	DFT-s	pi/2 BPSK	1	1		3750 MHz		
				1	137		18.51		0
				1	271		19.19		0
				135	0		18.80		0
				135	69		18.86		0
				135	138		19.22		0
				270	0		18.88		0
			QPSK	1	1		19.20		0
				1	137		18.52		0
				1	271		19.23		0
				135	0		18.80		0
				135	69		18.86		0
				135	138		19.23		0
				270	0		18.88		0
				270	0		19.19		0
		CP	16QAM	1	1		18.46		0
			64QAM	1	1		18.50		0
			256QAM	1	1		18.55		0
			QPSK	1	1		18.17		0

11.4.9. NR TDD Band n78 DoD Maximum Conducted Power

NR TDD Band n78 DoD Conducted Power_ Measured RSI = 4 (GRIP 4 ON) _Main2 ANT.

NR TDD Band n78 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		
10 0MHz	30	DFT-s	pi/2 BPSK	1	1		9.36		0
				1	137		9.34		0
				1	271		8.76		0
				135	0		9.37		0
				135	69		9.30		0
				135	138		8.85		0
				270	0		9.24		0
			QPSK	1	1		9.34		0
				1	137		9.31		0
				1	271		8.76		0
				135	0		9.38		0
				135	69		9.31		0
				135	138		8.85		0
				270	0		9.25		0
			16QAM	1	1		9.27		0
			64QAM	1	1		9.42		0
			256QAM	1	1		9.26		0
		CP	QPSK	1	1		9.39		0

NR TDD Band n78 DoD Conducted Power_ Measured Pmax_Main2 ANT.

NR TDD Band n78 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		25.22		0
				1	137		25.19		0
				1	271		24.61		0
				135	0		24.74		0.5
				135	69		25.16		0
				135	138		24.22		0.5
				270	0		24.62		0.5
			QPSK	1	1		25.22		0
				1	137		25.17		0
				1	271		24.60		0
				135	0		24.25		1
				135	69		25.15		0
				135	138		23.72		1
				270	0		24.11		1
			16QAM	1	1		24.15		1
			64QAM	1	1		22.68		2.5
			256QAM	1	1		20.70		4.5
		CP	QPSK	1	1		23.74		1.5

NR TDD Band n78 DoD Conducted Power_ Measured RSI = 0 (Free, Grip Sensor Off) _Main2
ANT.

NR TDD Band n78 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		
100 MHz	30	DFT-s	pi/2 BPSK	1	1		19.47		0
				1	137		19.40		0
				1	271		18.84		0
				135	0		19.47		0
				135	69		19.37		0
				135	138		18.96		0
				270	0		19.34		0
			QPSK	1	1		19.46		0
				1	137		19.38		0
				1	271		18.82		0
				135	0		19.46		0
				135	69		19.39		0
				135	138		18.95		0
				270	0		19.35		0
			16QAM	1	1		19.46		0
			64QAM	1	1		19.45		0
			256QAM	1	1		19.35		0
		CP	QPSK	1	1		19.50		0

11.4.10 NR Band SRS Conducted Power

[NR TDD Band n41 SRS Conducted Power]

Measured Pmax Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub2, SRS#2

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	14.20	0

Measured RSI = 0 (Free, Grip Sensor Off) Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub2, SRS#2

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	10.48	0

Measured Pmax Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub4, SRS#3

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	14.40	0

Measured RSI = 0 (Free, Grip Sensor Off) Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub4, SRS#3

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	10.65	0

Measured Pmax Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub1, SRS#4

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	13.00	0

Measured RSI = 0 (Free, Grip Sensor Off) Conducted Power

NR TDD Band n41_ 100 MHz Bandwidth Conducted Power_ Antenna: Sub1, SRS#4

Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
			518598	
			2592.99 MHz	
100 MHz	30	DFT-s QPSK 1RB 1offset	9.44	0

11.5 WIFI Conducted Power measurement method

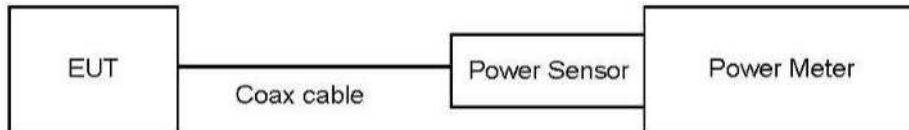
Un-Licensed Bands (DTS Band)

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

Test Procedure

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

Test setup



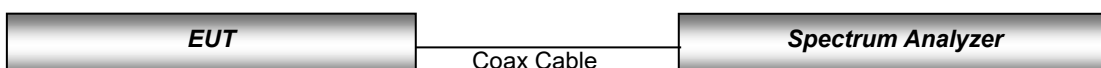
Un-Licensed Bands (NII Band)

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

Test Procedure

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

Test setup



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

Mode	Frequency [MHz]	Channel	Pmax		
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	18.34	17.67	21.03
	2 437	6	18.26	17.30	20.81
	2 462	11	18.35	18.09	21.23
	2 467	12	1.91	1.54	4.74
	2 472	13	0.24	-0.41	2.94

Mode	Frequency [MHz]	Channel	Plimit		
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]		
			WIFI 1	WIFI 2	MIMO
802.11b	2 412	1	10.49	10.10	13.31
	2 437	6	10.87	10.11	13.52
	2 462	11	10.31	10.15	13.24
	2 467	12	1.91	1.54	4.74
	2 472	13	0.24	-0.41	2.94

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

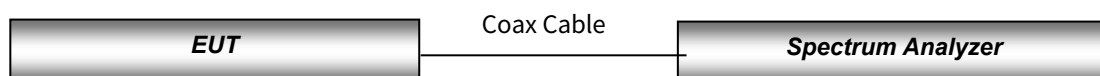
Frequency [MHz]	Channel	Pmax		
		IEEE 802.11 a (20 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 180	36	15.56	15.69	18.64
5 200	40	15.42	15.23	18.34
5 240	48	16.20	15.88	19.05
5 260	52	16.01	15.71	18.87
5 300	60	15.30	15.11	18.21
5 320	64	15.42	14.70	18.08
5 500	100	15.82	14.63	18.27
5 580	116	15.31	14.88	18.11
5 720	144	16.12	15.62	18.89
5 745	149	15.06	15.15	18.11
5 785	157	15.20	15.01	18.12
5 825	165	16.71	15.63	19.22
5 845	169	16.10	15.67	18.90
5 865	173	15.96	15.71	18.85
5 885	177	15.94	15.71	18.84
Frequency [MHz]	Channel	P limit		
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]		
		Ant.1	Ant.2	MIMO
5 210	42	5.52	5.21	8.38
5 290	58	5.95	5.99	8.98
5 530	106	5.77	5.97	8.88
5 610	122	5.22	5.82	8.54
5 690	138	4.89	5.91	8.44
5 775	155	4.12	5.13	7.66
5 855	171	4.81	4.76	7.79

Note:

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

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

Test Configuration



11.6 Bluetooth Maximum Conducted Power

11.6.1 Bluetooth Maximum Conducted Power (Pmax)

The Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1 (PL11)
DH5	0	15.85
	39	16.38
	78	15.90
2-DH5	0	8.16
	39	8.58
	78	8.77
3-DH5	0	8.18
	39	8.60
	78	8.78

11.6.2 Bluetooth Maximum Conducted Power (Grip)

The Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1 (PL11)
DH5	0	12.26
	39	12.90
	78	12.28

Per October 2016 TCB Workshop Notes:

When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.

Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth.

Bluetooth Duty cycle Measurement results



BT DH5 Maximum Duty Factor:

Mode	On time	Full time	Duty Cycle
DH5	2.890	3.750	0.771

The maximum duty cycle defined by chipset manufacturer is 78.0 % The duty cycle of DH5 measured by DUT was 77.1 %, and the measured SAR results was compensated by applying the maximum duty cycle

12. System Verification

12.1 Tissue Verification

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

◆ GSM/ UMTS/ LTE/ WLAN Band

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
05/15/2025	21.7	750H	705	0.860	43.280	0.889	42.174	-3.26	2.62
			710	0.863	43.170	0.890	42.148	-3.03	2.42
			750	0.904	42.614	0.893	41.940	1.23	1.61
05/16/2025	21.8	750H	750	0.905	42.634	0.893	41.940	1.34	1.65
			785	0.908	42.115	0.896	41.758	1.34	0.85
05/21/2025	20.9	835H	820	0.911	41.630	0.899	41.577	1.33	0.13
			835	0.924	41.409	0.900	41.500	2.67	-0.22
			850	0.940	41.230	0.916	41.500	2.62	-0.65
05/20/2025	21.6	835H	820	0.911	41.630	0.899	41.577	1.33	0.13
			835	0.924	41.410	0.900	41.500	2.67	-0.22
			850	0.940	41.230	0.916	41.500	2.62	-0.65
05/20/2025	21.0	835H	820	0.910	41.620	0.899	41.577	1.22	0.10
			835	0.924	41.403	0.900	41.500	2.67	-0.23
			850	0.940	41.230	0.916	41.500	2.62	-0.65
05/19/2025	21.2	1 800H	1 710	1.299	40.530	1.348	40.144	-3.64	0.96
			1 750	1.335	40.370	1.371	40.080	-2.63	0.72
			1 800	1.381	40.235	1.400	40.000	-1.36	0.59
05/22/2025	20.7	1 800H	1 710	1.297	40.530	1.348	40.144	-3.78	0.96
			1 750	1.335	40.350	1.371	40.080	-2.63	0.67
			1 800	1.379	40.219	1.400	40.000	-1.50	0.55
05/26/2025	21.0	1 800H	1 710	1.298	40.530	1.348	40.144	-3.71	0.96
			1 750	1.335	40.360	1.371	40.080	-2.63	0.70
			1 800	1.380	40.226	1.400	40.000	-1.43	0.56
07/11/2025	21.7	1 800H	1 710	1.305	39.950	1.348	40.144	-3.19	-0.48
			1 750	1.327	40.300	1.371	40.080	-3.21	0.55
			1 800	1.357	40.300	1.400	40.000	-3.07	0.75
05/22/2025	21.1	1 900H	1 850	1.430	40.080	1.400	40.000	2.14	0.20
			1 900	1.386	39.824	1.400	40.000	-1.00	-0.44
			1 910	1.396	39.790	1.400	40.000	-0.29	-0.52
05/16/2025	21.7	1 900H	1 850	1.428	40.050	1.400	40.000	2.00	0.13
			1 900	1.382	39.786	1.400	40.000	-1.29	-0.53
			1 910	1.392	39.750	1.400	40.000	-0.57	-0.63
05/23/2025	20.8	1 900H	1 850	1.428	40.060	1.400	40.000	2.00	0.15
			1 900	1.383	39.796	1.400	40.000	-1.21	-0.51
			1 910	1.393	39.750	1.400	40.000	-0.50	-0.63
05/19/2025	20.7	1 900H	1 850	1.430	40.070	1.400	40.000	2.14	0.17
			1 900	1.385	39.810	1.400	40.000	-1.07	-0.47
			1 910	1.396	39.770	1.400	40.000	-0.29	-0.57

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
07/11/2025	21.7	1 900H	1 850	1.351	39.390	1.400	40.000	-3.50	-1.53
			1 900	1.378	39.170	1.400	40.000	-1.57	-2.08
			1 910	1.388	39.130	1.400	40.000	-0.86	-2.18
06/05/2025	23.0	2 450H	2 400	1.738	39.140	1.756	39.290	-1.03	-0.38
			2 450	1.793	38.950	1.800	39.200	-0.39	-0.64
			2 500	1.849	38.790	1.855	39.140	-0.32	-0.89
06/12/2025	22.7	2 450H	2 400	1.725	39.110	1.756	39.290	-1.77	-0.46
			2 450	1.783	38.926	1.800	39.200	-0.94	-0.70
			2 500	1.836	38.760	1.855	39.140	-1.02	-0.97
05/21/2025	20.1	2 600H	2 500	1.867	39.210	1.855	39.140	0.65	0.18
			2 600	2.001	39.084	1.964	39.010	1.88	0.19
			2 690	2.110	38.240	2.062	38.894	2.33	-1.68
06/16/2025	20.7	5 180H-5 320H	5 180	4.681	35.420	4.635	36.010	0.99	-1.64
			5 250	4.770	35.199	4.706	35.930	1.36	-2.03
			5 280	4.810	35.130	4.737	35.894	1.54	-2.13
			5 320	4.869	35.090	4.778	35.846	1.90	-2.11
		5 500H-5 600H	5 500	5.024	34.930	4.963	35.640	1.23	-1.99
			5 600	5.137	34.727	5.065	35.530	1.42	-2.26
			5 750	5.353	34.655	5.219	35.360	2.57	-1.99
		5 750H-5 825H	5 750	5.353	34.655	5.219	35.360	2.57	-1.99
			5 800	5.281	34.669	5.270	35.300	0.21	-1.79
			5 825	5.248	34.620	5.296	35.270	-0.91	-1.84
		5800H-5885H	5 800	5.281	34.669	5.270	35.300	0.21	-1.79
			5 835	5.237	34.690	5.306	35.258	-1.30	-1.61
			5 845	5.230	34.555	5.316	35.246	-1.62	-1.96
			5 855	5.226	34.510	5.326	35.235	-1.88	-2.06
			5 865	5.225	34.455	5.337	35.225	-2.10	-2.19
			5 875	5.228	34.400	5.347	35.215	-2.23	-2.31
			5 885	5.235	34.345	5.357	35.205	-2.28	-2.44

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
06/18/2025	23.3	5 180H-5 320H	5 180	4.683	35.430	4.635	36.010	1.04	-1.61
			5 250	4.770	35.200	4.706	35.930	1.36	-2.03
			5 280	4.813	35.130	4.737	35.894	1.60	-2.13
			5 320	4.870	35.090	4.778	35.846	1.93	-2.11
		5 500H-5 600H	5 500	5.026	34.930	4.963	35.640	1.27	-1.99
			5 600	5.139	34.733	5.065	35.530	1.46	-2.24
			5 750	5.355	34.657	5.219	35.360	2.61	-1.99
		5 750H-5 825H	5 750	5.355	34.657	5.219	35.360	2.61	-1.99
			5 800	5.283	34.673	5.270	35.300	0.25	-1.78
			5 825	5.249	34.630	5.296	35.270	-0.89	-1.81
		5800H-5885H	5 800	5.283	34.673	5.270	35.300	0.25	-1.78
			5 835	5.239	34.600	5.306	35.258	-1.26	-1.87
			5 845	5.232	34.560	5.316	35.246	-1.58	-1.95
			5 855	5.228	34.515	5.326	35.235	-1.84	-2.04
			5 865	5.228	34.460	5.337	35.225	-2.04	-2.17
			5 875	5.231	34.405	5.347	35.215	-2.17	-2.30
			5 885	5.237	34.350	5.357	35.205	-2.24	-2.43
06/17/2025	23.0	5 180H-5 320H	5 180	4.683	35.420	4.635	36.010	1.04	-1.64
			5 250	4.769	35.194	4.706	35.930	1.34	-2.05
			5 280	4.813	35.130	4.737	35.894	1.60	-2.13
			5 320	4.869	35.090	4.778	35.846	1.90	-2.11
		5 500H-5 600H	5 500	5.028	34.920	4.963	35.640	1.31	-2.02
			5 600	5.138	34.736	5.065	35.530	1.44	-2.23
			5 750	5.355	34.654	5.219	35.360	2.61	-2.00
		5 750H-5 825H	5 750	5.355	34.654	5.219	35.360	2.61	-2.00
			5 800	5.284	34.671	5.270	35.300	0.27	-1.78
			5 825	5.251	34.630	5.296	35.270	-0.85	-1.81
		5800H-5885H	5 800	5.284	34.671	5.270	35.300	0.27	-1.78
			5 835	5.241	34.600	5.306	35.258	-1.23	-1.87
			5 845	5.235	34.560	5.316	35.246	-1.52	-1.95
			5 855	5.231	34.515	5.326	35.235	-1.78	-2.04
			5 865	5.231	34.465	5.337	35.225	-1.99	-2.16
			5 875	5.234	34.410	5.347	35.215	-2.11	-2.29
			5 885	5.240	34.350	5.357	35.205	-2.18	-2.43

◆ 5G NR SUB 6 Band

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
05/30/2025	21.1	750H	705	0.860	43.300	0.889	42.174	-3.26	2.67
			710	0.864	43.190	0.890	42.148	-2.92	2.47
			750	0.905	42.640	0.893	41.940	1.34	1.67
05/27/2025	21.4	835H	820	0.910	41.630	0.899	41.577	1.22	0.13
			835	0.923	41.391	0.900	41.500	2.56	-0.26
			850	0.940	41.210	0.916	41.500	2.62	-0.70
05/28/2025	21.6	835H	820	0.910	41.630	0.899	41.577	1.22	0.13
			835	0.924	41.397	0.900	41.500	2.67	-0.25
			850	0.940	41.220	0.916	41.500	2.62	-0.67
05/29/2025	21.3	1800H	1 710	1.300	40.530	1.348	40.144	-3.56	0.96
			1 750	1.336	40.380	1.371	40.080	-2.55	0.75
			1 800	1.382	40.241	1.400	40.000	-1.29	0.60
05/19/2025	23.0	2 600H	2 500	1.847	38.570	1.855	39.140	-0.43	-1.46
			2 600	1.958	38.162	1.964	39.010	-0.31	-2.17
			2 690	2.057	37.720	2.062	38.894	-0.24	-3.02
06/04/2025	22.4	2 600H	2 500	1.849	38.590	1.855	39.140	-0.32	-1.41
			2 600	1.960	38.177	1.964	39.010	-0.20	-2.14
			2 690	2.061	37.730	2.062	38.894	-0.05	-2.99
05/19/2025	23.0	3 500H-3 970H	3 400	2.834	38.540	2.810	38.040	0.85	1.31
			3 500	2.931	38.396	2.913	37.930	0.62	1.23
			3 550	2.980	38.330	2.964	37.870	0.54	1.21
			3 700	3.116	38.112	3.118	37.700	-0.06	1.09
			3 750	3.164	38.040	3.169	37.640	-0.16	1.06
			3 800	3.216	37.970	3.220	37.590	-0.12	1.01
			3 900	3.318	37.808	3.233	37.470	2.63	0.90
			3 970	3.394	37.710	3.394	37.390	0.00	0.86

◆ Cover. Area Scan

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
06/18/2025	21.6	750H	705	0.883	42.850	0.889	42.174	-0.67	1.60
			710	0.885	42.800	0.890	42.148	-0.56	1.55
			750	0.901	42.600	0.893	41.940	0.90	1.57
06/18/2025	21.6	1800H	1 710	1.300	40.600	1.348	40.144	-3.56	1.14
			1 750	1.320	40.600	1.371	40.080	-3.72	1.30
			1 800	1.360	40.500	1.400	40.000	-2.86	1.25
06/18/2025	21.6	2450H	2 400	1.740	39.100	1.756	39.290	-0.91	-0.48
			2 450	1.790	38.900	1.800	39.200	-0.56	-0.77
			2 500	1.850	38.800	1.855	39.140	-0.27	-0.87
06/18/2025	21.6	2600H	2 500	1.790	40.300	1.855	39.140	-3.50	2.96
			2 600	1.970	40.300	1.964	39.010	0.31	3.31
			2 690	2.140	38.900	2.062	38.894	3.78	0.02
06/18/2025	21.6	3500H	3 400	2.800	39.100	2.810	38.040	-0.36	2.79
			3 500	2.890	38.900	2.913	37.930	-0.79	2.56
			3 550	2.940	38.800	2.964	37.870	-0.81	2.46
06/18/2025	21.6	5 180H- 5 320H	5 180	4.650	35.400	4.635	36.010	0.32	-1.69
			5 250	4.740	35.200	4.706	35.930	0.72	-2.03
			5 280	4.780	35.100	4.737	35.894	0.91	-2.21
			5 320	4.840	35.100	4.778	35.846	1.30	-2.08
		5 500H- 5 600H	5 500	4.990	34.900	4.963	35.640	0.54	-2.08
			5 600	5.110	34.700	5.065	35.530	0.89	-2.34
			5 750	5.320	34.600	5.219	35.360	1.94	-2.15
		5 750H- 5 825H	5 750	5.320	34.600	5.219	35.360	1.94	-2.15
			5 800	5.250	34.700	5.270	35.300	-0.38	-1.70
			5 825	5.215	34.600	5.296	35.270	-1.53	-1.90
		5800H- 5885H	5 800	5.250	34.700	5.270	35.300	-0.38	-1.70
			5 835	5.205	34.600	5.306	35.258	-1.90	-1.87
			5 845	5.195	34.550	5.316	35.246	-2.28	-1.97
			5 855	5.190	34.500	5.326	35.235	-2.55	-2.09
			5 865	5.190	34.450	5.337	35.225	-2.75	-2.20
			5 875	5.195	34.400	5.347	35.215	-2.84	-2.31
			5 885	5.205	34.350	5.357	35.205	-2.84	-2.43

12.2 System Verification

◆ GSM/ UMTS/ LTE/ WLAN Band

Input Power: 50 mW

Freq.	Date	Probe	Dipole	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit
[MHz]		(S/N)	(S/N)		[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	05/15/2025	3968	1122	Head	21.8	21.7	8.58	0.415	8.3	- 3.26	± 10
750	05/16/2025	3968	1122	Head	21.9	21.8	8.58	0.417	8.34	- 2.80	± 10
835	05/21/2025	7702	4d165	Head	21.0	20.9	9.32	0.496	9.92	+ 6.44	± 10
835	05/20/2025	7702	4d165	Head	21.7	21.6	9.32	0.494	9.88	+ 6.01	± 10
835	05/20/2025	3968	4d165	Head	21.1	21.0	9.32	0.506	10.12	+ 8.58	± 10
1 800	05/19/2025	7702	2d015	Head	21.3	21.2	38.1	1.85	37.0	- 2.89	± 10
1 800	05/22/2025	3968	2d015	Head	20.8	20.7	38.1	1.79	35.8	- 6.04	± 10
1 800	05/26/2025	3968	2d015	Head	21.1	21.0	38.1	1.78	35.6	- 6.56	± 10
1 800	07/11/2025	7370	2d015	Head	21.8	21.7	38.1	1.86	37.2	- 2.36	± 10
1 900	05/22/2025	7702	5d061	Head	21.2	21.1	38.8	2.00	40.0	+ 3.09	± 10
1 900	05/16/2025	7702	5d061	Head	21.8	21.7	38.8	1.99	39.8	+ 2.58	± 10
1 900	05/23/2025	3968	5d061	Head	20.9	20.8	38.8	1.88	37.6	- 3.09	± 10
1 900	05/19/2025	3968	5d061	Head	20.8	20.7	38.8	1.89	37.8	- 2.58	± 10
1 900	07/11/2025	7370	5d061	Head	21.8	21.7	38.8	1.90	38.0	- 2.06	± 10
2 450	06/05/2025	3968	1049	Head	23.1	23.0	52.6	2.50	50.0	- 4.94	± 10
2 450	06/12/2025	3968	1049	Head	22.8	22.7	52.6	2.48	49.6	- 5.70	± 10
2 600	05/21/2025	3968	1106	Head	20.2	20.1	55.7	2.87	57.4	+ 3.05	± 10
5 250	06/18/2025	3882	1107	Head	23.4	23.3	80.2	4.17	83.4	+ 3.99	± 10
5 250	06/17/2025	3882	1107	Head	23.1	23.0	80.2	4.16	83.2	+ 3.74	± 10
5 250	06/16/2025	7751	1107	Head	20.8	20.7	80.2	3.91	78.2	- 2.49	± 10
5 600	06/18/2025	3882	1107	Head	23.4	23.3	82.1	4.17	83.4	+ 1.58	± 10
5 600	06/17/2025	3882	1107	Head	23.1	23.0	82.1	4.16	83.2	+ 1.34	± 10
5 600	06/16/2025	7751	1107	Head	20.8	20.7	82.1	4.25	85.0	+ 3.53	± 10
5 750	06/18/2025	3882	1107	Head	23.4	23.3	79.9	4.17	83.4	+ 4.38	± 10
5 750	06/17/2025	3882	1107	Head	23.1	23.0	79.9	4.16	83.2	+ 4.13	± 10
5 750	06/16/2025	7751	1107	Head	20.8	20.7	79.9	3.79	75.8	- 5.13	± 10
5 800	06/18/2025	3882	1107	Head	23.4	23.3	79.3	4.04	80.8	+ 1.89	± 10
5 800	06/17/2025	3882	1107	Head	23.1	23.0	79.3	4.07	81.4	+ 2.65	± 10
5 800	06/16/2025	7751	1107	Head	20.8	20.7	79.3	4.17	83.4	+ 5.17	± 10

◆ 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]	[%]	[%]
750	05/30/2025	3968	1122	Head	21.2	21.1	8.58	0.416	8.32	- 3.03	± 10
835	05/27/2025	3968	4d165	Head	21.5	21.4	9.32	0.494	9.88	+ 6.01	± 10
835	05/28/2025	3968	4d165	Head	21.7	21.6	9.32	0.495	9.9	+ 6.22	± 10
1 800	05/29/2025	3968	2d015	Head	21.4	21.3	38.1	1.79	35.8	- 6.04	± 10
2 600	05/19/2025	7751	1106	Head	23.1	23.0	55.7	2.77	55.4	- 0.54	± 10
2 600	06/04/2025	3968	1106	Head	22.5	22.4	55.7	2.80	56.0	+ 0.54	± 10
3 500	05/19/2025	7751	1040	Head	23.1	23.0	65.2	3.27	65.4	+ 0.31	± 10
3 700	05/19/2025	7751	1105	Head	23.1	23.0	69.3	3.33	66.6	- 3.90	± 10
3 900	05/19/2025	7751	1086	Head	23.1	23.0	67.6	3.45	69.0	+ 2.07	± 10

◆ Keyboard Cover.

Input Power: 50 mW

Freq.	Date	Probe	Dipole	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR _{1g} (SPEAG)	50 mW Measured SAR _{1g}	1 W Normalized SAR _{1g}	Deviation	Limit
[MHz]		(S/N)	(S/N)		[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	06/18/2025	7681	1122	Head	21.7	21.6	8.58	0.465	9.3	+ 8.39	± 10
1 800	06/18/2025	7681	2d015	Head	21.7	21.6	38.1	1.91	38.2	+ 0.26	± 10
2 450	06/18/2025	7681	1049	Head	21.7	21.6	52.6	2.55	51.0	- 3.04	± 10
2 600	06/18/2025	7681	1106	Head	21.7	21.6	55.7	3.03	60.6	+ 8.80	± 10
3 500	06/18/2025	7681	1040	Head	21.7	21.6	65.2	3.18	63.6	- 2.45	± 10
5 600	06/18/2025	7681	1107	Head	21.7	21.6	82.1	4.16	83.2	+ 1.34	± 10

12.3 SAR Test System Verification Procedure

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

- Cabling the system, using the verification kit equipment.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.

Note;

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

13. SAR Test Data Summary

13.1 Body SAR Measurement Results

GSM 850 Body SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(mm)	(W/kg)		(W/kg)	
836.6	190	GPRS 4Tx	Main1	19.0	18.96	-0.09	Rear	1:2.075	Active	0	0.536	1.009	0.541	
836.6	190	GPRS 4Tx	Main1	26.5	25.11	0.11	Left	1:2.075	Active	0	0.058	1.377	0.080	
836.6	190	GPRS 4Tx	Main1	26.5	25.11	0.05	Right	1:2.075	Active	0	0.146	1.377	0.201	
836.6	190	GPRS 4Tx	Main1	19.0	18.96	-0.01	Top	1:2.075	Active	0	0.752	1.009	0.759	B1
836.6	190	GPRS 4Tx	Main1	28.0	27.81	-0.15	Rear	1:2.075	Inactive	21	0.380	1.045	0.397	
836.6	190	GPRS 4Tx	Main1	28.0	27.81	0.17	Left	1:2.075	Inactive	10	0.044	1.045	0.046	
836.6	190	GPRS 4Tx	Main1	28.0	27.81	-0.04	Right	1:2.075	Inactive	11	0.091	1.045	0.095	
836.6	190	GPRS 4Tx	Main1	28.0	27.81	-0.08	Top	1:2.075	Inactive	26	0.269	1.045	0.281	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg Averaged over 1 gram							

GSM 1900 Body SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(mm)	(W/kg)		(W/kg)	
1 880	661	GPRS 4Tx	Main1	18.0	16.61	0.15	Rear	1:2.075	Active	0	0.358	1.377	0.493	B2
1 880	661	GPRS 4Tx	Main1	24.0	23.29	0.10	Left	1:2.075	Active	0	0.091	1.178	0.107	
1 880	661	GPRS 4Tx	Main1	24.0	23.29	0.14	Right	1:2.075	Active	0	0.315	1.178	0.371	
1 880	661	GPRS 4Tx	Main1	18.0	16.61	0.18	Top	1:2.075	Active	0	0.319	1.377	0.439	
1 880	661	GPRS 4Tx	Main1	26.0	25.64	-0.18	Rear	1:2.075	Inactive	21	0.123	1.086	0.134	
1 880	661	GPRS 4Tx	Main1	26.0	25.64	-0.13	Left	1:2.075	Inactive	10	0.036	1.086	0.039	
1 880	661	GPRS 4Tx	Main1	26.0	25.64	0.13	Right	1:2.075	Inactive	11	0.06	1.086	0.065	
1 880	661	GPRS 4Tx	Main1	26.0	25.64	0.10	Top	1:2.075	Inactive	26	0.115	1.086	0.125	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg Averaged over 1 gram							

UMTS Band 5 Body SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(mm)	(W/kg)		(W/kg)	
826.4	4132	RMC	Main1	16.0	15.12	0.00	Rear	1:1	Active	0	0.423	1.225	0.518	
836.6	4183	RMC	Main1	22.5	21.47	0.12	Left	1:1	Active	0	0.117	1.268	0.148	
836.6	4183	RMC	Main1	22.5	21.47	0.13	Right	1:1	Active	0	0.188	1.268	0.238	
826.4	4132	RMC	Main1	16.0	15.12	0.12	Top	1:1	Active	0	0.509	1.225	0.624	B3
836.6	4183	RMC	Main1	24.0	23.90	0.00	Rear	1:1	Inactive	21	0.379	1.023	0.388	
836.6	4183	RMC	Main1	24.0	23.90	0.13	Left	1:1	Inactive	10	0.046	1.023	0.047	
836.6	4183	RMC	Main1	24.0	23.90	0.07	Right	1:1	Inactive	11	0.100	1.023	0.102	
836.6	4183	RMC	Main1	24.0	23.90	0.11	Top	1:1	Inactive	26	0.304	1.023	0.311	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg Averaged over 1 gram							

UMTS Band 4 Body SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(mm)	(W/kg)		(W/kg)	
1 732.4	1412	RMC	Main1	14.0	12.45	0.11	Rear	1:1	Active	0	0.329	1.429	0.470	
1 732.4	1412	RMC	Main1	21.5	20.41	-0.03	Left	1:1	Active	0	0.414	1.285	0.532	
1 732.4	1412	RMC	Main1	21.5	20.41	0.17	Right	1:1	Active	0	0.215	1.285	0.276	
1 732.4	1412	RMC	Main1	14.0	12.45	0.13	Top	1:1	Active	0	0.479	1.429	0.684	B4
1 732.4	1412	RMC	Main1	24.0	23.24	-0.11	Rear	1:1	Inactive	21	0.197	1.191	0.235	
1 732.4	1412	RMC	Main1	24.0	23.24	0.02	Left	1:1	Inactive	10	0.055	1.191	0.066	
1 732.4	1412	RMC	Main1	24.0	23.24	0.07	Right	1:1	Inactive	11	0.081	1.191	0.096	
1 732.4	1412	RMC	Main1	24.0	23.24	0.04	Top	1:1	Inactive	26	0.197	1.191	0.235	
1 732.4	1412	RMC	Main1	21.5	20.41	0.15	Left	1:1	Active	0	0.220	1.285	0.283	#
1 732.4	1412	RMC	Main1	21.5	20.41	0.12	Left	1:1	Active	0	0.217	1.285	0.279	##
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg Averaged over 1 gram							

Note:

#: Laptop Mode with Cover Variant 1

##: Laptop Mode with Cover Variant 2

UMTS Band 2 Body SAR

Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(mm)	(W/kg)		(W/kg)	
1 880.0	9400	RMC	Main1	13.5	12.52	0.17	Rear	1:1	Active	0	0.296	1.253	0.371	
1 880.0	9400	RMC	Main1	20.0	19.07	0.06	Left	1:1	Active	0	0.105	1.239	0.130	
1 880.0	9400	RMC	Main1	20.0	19.07	0.13	Right	1:1	Active	0	0.233	1.239	0.289	
1 880.0	9400	RMC	Main1	13.5	12.52	0.13	Top	1:1	Active	0	0.464	1.253	0.581	B5
1 880.0	9400	RMC	Main1	24.0	23.48	-0.15	Rear	1:1	Inactive	21	0.221	1.127	0.249	
1 880.0	9400	RMC	Main1	24.0	23.48	0.13	Left	1:1	Inactive	10	0.085	1.127	0.096	
1 880.0	9400	RMC	Main1	24.0	23.48	0.13	Right	1:1	Inactive	11	0.115	1.127	0.130	
1 880.0	9400	RMC	Main1	24.0	23.48	0.05	Top	1:1	Inactive	26	0.141	1.127	0.159	
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 2 (ENDC) Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 900	19100	QPSK	Sub2	20	11.5	10.16	-0.12	Rear	0	1	99	1:1	Active	0	0.327	1.361	0.445	
1 900	19100	QPSK	Sub2	20	11.5	10.24	-0.11	Rear	0	50	0	1:1	Active	0	0.334	1.337	0.447	
1 900	19100	QPSK	Sub2	20	11.5	10.16	-0.14	Bottom	0	1	99	1:1	Active	0	0.257	1.361	0.350	
1 900	19100	QPSK	Sub2	20	11.5	10.24	-0.14	Bottom	0	50	0	1:1	Active	0	0.246	1.337	0.329	
1 880	18900	QPSK	Sub2	20	24.0	23.22	0.17	Rear	0	1	99	1:1	Inactive	11	0.418	1.197	0.500	B6
1 880	18900	QPSK	Sub2	20	23.0	22.28	-0.14	Rear	1	50	0	1:1	Inactive	11	0.356	1.180	0.420	
1 880	18900	QPSK	Sub2	20	24.0	23.22	-0.19	Left	0	1	99	1:1	N/A	0	0.399	1.197	0.478	
1 880	18900	QPSK	Sub2	20	23.0	22.28	-0.16	Left	1	50	0	1:1	N/A	0	0.249	1.180	0.294	
1 880	18900	QPSK	Sub2	20	24.0	23.22	-0.14	Right	0	1	99	1:1	N/A	0	0.250	1.197	0.299	
1 880	18900	QPSK	Sub2	20	23.0	22.28	-0.19	Right	1	50	0	1:1	N/A	0	0.235	1.180	0.277	
1 880	18900	QPSK	Sub2	20	24.0	23.22	-0.06	Bottom	0	1	99	1:1	Inactive	14	0.365	1.197	0.437	
1 880	18900	QPSK	Sub2	20	23.0	22.28	0.05	Bottom	1	50	0	1:1	Inactive	14	0.299	1.180	0.353	
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 5 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)							(mm)	(W/kg)		(W/kg)	
831.5	26865	QPSK	Main1	10	25.0	24.17	-0.19	Rear	0	1	0	1:1	Inactive	21	0.466	1.211	0.564	B7
831.5	26865	QPSK	Main1	10	24.0	23.25	-0.10	Rear	1	25	0	1:1	Inactive	21	0.373	1.189	0.443	
831.5	26865	QPSK	Main1	10	25.0	24.17	-0.02	Left	0	1	0	1:1	Inactive	10	0.065	1.211	0.079	
831.5	26865	QPSK	Main1	10	24.0	23.25	0.04	Left	1	25	0	1:1	Inactive	10	0.052	1.189	0.062	
831.5	26865	QPSK	Main1	10	25.0	24.17	0.02	Right	0	1	0	1:1	Inactive	11	0.087	1.211	0.105	
831.5	26865	QPSK	Main1	10	24.0	23.25	0.09	Right	1	25	0	1:1	Inactive	11	0.076	1.189	0.090	
831.5	26865	QPSK	Main1	10	25.0	24.17	0.15	Top	0	1	0	1:1	Inactive	26	0.337	1.211	0.408	
831.5	26865	QPSK	Main1	10	24.0	23.25	0.14	Top	1	25	0	1:1	Inactive	26	0.284	1.189	0.338	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 12 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)							(mm)	(W/kg)		(W/kg)	
707.5	23095	QPSK	Main1	10	16.0	14.90	0.15	Rear	0	1	0	1:1	Active	0	0.313	1.288	0.403	
707.5	23095	QPSK	Main1	10	16.0	14.87	0.17	Rear	0	25	0	1:1	Active	0	0.306	1.297	0.397	
707.5	23095	QPSK	Main1	10	16.0	14.90	-0.11	Top	0	1	0	1:1	Active	0	0.307	1.288	0.395	
707.5	23095	QPSK	Main1	10	16.0	14.87	-0.16	Top	0	25	0	1:1	Active	0	0.315	1.297	0.409	B8
707.5	23095	QPSK	Main1	10	24.0	23.57	-0.10	Rear	0	1	0	1:1	Inactive	21	0.241	1.104	0.266	
707.5	23095	QPSK	Main1	10	23.0	22.57	0.04	Rear	1	25	0	1:1	Inactive	21	0.190	1.104	0.210	
707.5	23095	QPSK	Main1	10	24.0	23.57	-0.15	Left	0	1	0	1:1	N/A	0	0.087	1.104	0.096	
707.5	23095	QPSK	Main1	10	23.0	22.57	-0.14	Left	1	25	0	1:1	N/A	0	0.085	1.104	0.094	
707.5	23095	QPSK	Main1	10	24.0	23.57	-0.15	Right	0	1	0	1:1	N/A	0	0.216	1.104	0.238	
707.5	23095	QPSK	Main1	10	23.0	22.57	-0.10	Right	1	25	0	1:1	N/A	0	0.147	1.104	0.162	
707.5	23095	QPSK	Main1	10	24.0	23.57	0.05	Top	0	1	0	1:1	Inactive	26	0.144	1.104	0.159	
707.5	23095	QPSK	Main1	10	23.0	22.57	0.04	Top	1	25	0	1:1	Inactive	26	0.123	1.104	0.136	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 13 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
782	23230	QPSK	Main1	10	14.0	12.23	-0.19	Rear	0	1	0	1:1	Active	0	0.173	1.503	0.260	
782	23230	QPSK	Main1	10	14.0	12.17	-0.14	Rear	0	25	0	1:1	Active	0	0.168	1.524	0.256	
782	23230	QPSK	Main1	10	14.0	12.23	-0.16	Top	0	1	0	1:1	Active	0	0.191	1.503	0.287	
782	23230	QPSK	Main1	10	14.0	12.17	-0.12	Top	0	25	0	1:1	Active	0	0.187	1.524	0.285	
782	23230	QPSK	Main1	10	24.0	22.94	-0.17	Rear	0	1	0	1:1	Inactive	21	0.307	1.276	0.392	
782	23230	QPSK	Main1	10	23.0	22.04	-0.13	Rear	1	25	0	1:1	Inactive	21	0.255	1.247	0.318	
782	23230	QPSK	Main1	10	24.0	22.94	-0.14	Left	0	1	0	1:1	N/A	0	0.083	1.276	0.106	
782	23230	QPSK	Main1	10	23.0	22.04	-0.17	Left	1	25	0	1:1	N/A	0	0.063	1.247	0.079	
782	23230	QPSK	Main1	10	24.0	22.94	-0.17	Right	0	1	0	1:1	N/A	0	0.373	1.276	0.476	B9
782	23230	QPSK	Main1	10	23.0	22.04	-0.19	Right	1	25	0	1:1	N/A	0	0.280	1.247	0.349	
782	23230	QPSK	Main1	10	24.0	22.94	0.16	Top	0	1	0	1:1	Inactive	26	0.233	1.276	0.297	
782	23230	QPSK	Main1	10	23.0	22.04	-0.12	Top	1	25	0	1:1	Inactive	26	0.190	1.247	0.237	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 25 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 860	26140	QPSK	Main1	20	13.0	11.39	-0.11	Rear	0	1	99	1:1	Active	0	0.276	1.449	0.400	
1 860	26140	QPSK	Main1	20	13.0	11.51	-0.19	Rear	0	50	25	1:1	Active	0	0.283	1.409	0.399	
1 860	26140	QPSK	Main1	20	19.0	17.22	0.12	Left	0	1	0	1:1	Active	0	0.084	1.507	0.127	
1 860	26140	QPSK	Main1	20	19.0	17.31	0.00	Left	0	50	49	1:1	Active	0	0.083	1.475	0.122	
1 860	26140	QPSK	Main1	20	19.0	17.22	0.14	Right	0	1	0	1:1	Active	0	0.124	1.507	0.187	
1 860	26140	QPSK	Main1	20	19.0	17.31	0.16	Right	0	50	49	1:1	Active	0	0.126	1.475	0.186	
1 860	26140	QPSK	Main1	20	13.0	11.39	-0.15	Top	0	1	99	1:1	Active	0	0.347	1.449	0.503	
1 860	26140	QPSK	Main1	20	13.0	11.51	0.10	Top	0	50	25	1:1	Active	0	0.391	1.409	0.551	B10
1 860	26140	QPSK	Main1	20	24.0	23.26	-0.14	Rear	0	1	99	1:1	Inactive	21	0.222	1.186	0.263	
1 905	26590	QPSK	Main1	20	23.0	22.31	-0.11	Rear	1	50	25	1:1	Inactive	21	0.162	1.172	0.190	
1 860	26140	QPSK	Main1	20	24.0	23.26	0.11	Left	0	1	99	1:1	Inactive	10	0.094	1.186	0.111	
1 905	26590	QPSK	Main1	20	23.0	22.31	0.04	Left	1	50	25	1:1	Inactive	10	0.074	1.172	0.087	
1 860	26140	QPSK	Main1	20	24.0	23.26	0.10	Right	0	1	99	1:1	Inactive	11	0.087	1.186	0.103	
1 905	26590	QPSK	Main1	20	23.0	22.31	0.15	Right	1	50	25	1:1	Inactive	11	0.068	1.172	0.080	
1 860	26140	QPSK	Main1	20	24.0	23.26	0.13	Top	0	1	99	1:1	Inactive	26	0.254	1.186	0.301	
1 905	26590	QPSK	Main1	20	23.0	22.31	0.17	Top	1	50	25	1:1	Inactive	26	0.248	1.172	0.291	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 26 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
831.5	26865	QPSK	Main1	15	15.0	13.64	0.12	Rear	0	1	0	1:1	Active	0	0.327	1.368	0.447	
831.5	26865	QPSK	Main1	15	15.0	13.68	0.11	Rear	0	36	0	1:1	Active	0	0.262	1.355	0.355	
831.5	26865	QPSK	Main1	15	23.0	21.59	0.18	Left	0	1	0	1:1	Active	0	0.066	1.384	0.091	
831.5	26865	QPSK	Main1	15	23.0	21.68	0.10	Left	0	36	0	1:1	Active	0	0.031	1.355	0.042	
831.5	26865	QPSK	Main1	15	23.0	21.59	0.18	Right	0	1	0	1:1	Active	0	0.200	1.384	0.277	
831.5	26865	QPSK	Main1	15	23.0	21.68	0.14	Right	0	36	0	1:1	Active	0	0.188	1.355	0.255	
831.5	26865	QPSK	Main1	15	15.0	13.64	0.11	Top	0	1	0	1:1	Active	0	0.345	1.368	0.472	
831.5	26865	QPSK	Main1	15	15.0	13.68	0.13	Top	0	36	0	1:1	Active	0	0.358	1.355	0.485	B11
831.5	26865	QPSK	Main1	15	24.0	23.39	-0.13	Rear	0	1	0	1:1	Inactive	21	0.330	1.151	0.380	
831.5	26865	QPSK	Main1	15	23.0	22.44	0.11	Rear	1	36	1	1:1	Inactive	21	0.263	1.138	0.299	
831.5	26865	QPSK	Main1	15	24.0	23.39	0.17	Left	0	1	0	1:1	Inactive	10	0.022	1.151	0.025	
831.5	26865	QPSK	Main1	15	23.0	22.44	0.12	Left	1	36	1	1:1	Inactive	10	0.033	1.138	0.038	
831.5	26865	QPSK	Main1	15	24.0	23.39	0.06	Right	0	1	0	1:1	Inactive	11	0.061	1.151	0.070	
831.5	26865	QPSK	Main1	15	23.0	22.44	0.14	Right	1	36	1	1:1	Inactive	11	0.041	1.138	0.047	
831.5	26865	QPSK	Main1	15	24.0	23.39	0.13	Top	0	1	0	1:1	Inactive	26	0.246	1.151	0.283	
831.5	26865	QPSK	Main1	15	23.0	22.44	0.09	Top	1	36	1	1:1	Inactive	26	0.204	1.138	0.232	
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 SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)							(mm)	(W/kg)		(W/kg)	
2 549.5	40185	QPSK	Main1	20	14.5	14.24	0.19	Rear	0	1	0	1:1.58	Active	0	0.499	1.062	0.530	
2 549.5	40185	QPSK	Main1	20	14.5	14.25	0.11	Rear	0	50	0	1:1.58	Active	0	0.503	1.059	0.533	
2 549.5	40185	QPSK	Main1	20	14.5	14.24	-0.14	Top	0	1	0	1:1.58	Active	0	0.597	1.062	0.634	
2 506.0	39750	QPSK	Main1	20	14.5	14.22	-0.13	Top	0	1	99	1:1.58	Active	0	0.545	1.067	0.582	
2 593.0	40620	QPSK	Main1	20	14.5	14.04	-0.14	Top	0	1	0	1:1.58	Active	0	0.471	1.112	0.524	
2 636.5	41055	QPSK	Main1	20	14.5	13.51	-0.16	Top	0	1	0	1:1.58	Active	0	0.481	1.256	0.604	
2 680.0	41490	QPSK	Main1	20	14.5	13.20	-0.10	Top	0	1	0	1:1.58	Active	0	0.447	1.349	0.603	
2 549.5	40185	QPSK	Main1	20	14.5	14.25	-0.12	Top	0	50	0	1:1.58	Active	0	0.606	1.059	0.642	
2 506.0	39750	QPSK	Main1	20	14.5	14.16	-0.13	Top	0	50	49	1:1.58	Active	0	0.562	1.081	0.608	
2 593.0	40620	QPSK	Main1	20	14.5	13.93	-0.10	Top	0	50	25	1:1.58	Active	0	0.480	1.140	0.547	
2 636.5	41055	QPSK	Main1	20	14.5	13.40	-0.13	Top	0	50	0	1:1.58	Active	0	0.487	1.288	0.627	
2 680.0	41490	QPSK	Main1	20	14.5	13.10	-0.13	Top	0	50	0	1:1.58	Active	0	0.438	1.380	0.604	
2 549.5	40185	QPSK	Main1	20	14.5	14.17	-0.16	Top	0	100	0	1:1.58	Active	0	0.647	1.079	0.698	B12
2 506.0	39750	QPSK	Main1	20	24.0	23.93	-0.11	Rear	0	1	0	1:1.58	Inactive	21	0.064	1.016	0.065	
2 506.0	39750	QPSK	Main1	20	23.0	22.98	-0.14	Rear	1	50	0	1:1.58	Inactive	21	0.065	1.005	0.065	
2 506.0	39750	QPSK	Main1	20	24.0	23.93	-0.15	Left	0	1	0	1:1.58	N/A	0	0.098	1.016	0.100	
2 506.0	39750	QPSK	Main1	20	23.0	22.98	-0.15	Left	1	50	0	1:1.58	N/A	0	0.096	1.005	0.096	
2 506.0	39750	QPSK	Main1	20	24.0	23.93	-0.19	Right	0	1	0	1:1.58	N/A	0	0.145	1.016	0.147	
2 506.0	39750	QPSK	Main1	20	23.0	22.98	-0.14	Right	1	50	0	1:1.58	N/A	0	0.155	1.005	0.156	
2 506.0	39750	QPSK	Main1	20	24.0	23.93	0.02	Top	0	1	0	1:1.58	Inactive	26	0.089	1.016	0.090	
2 506.0	39750	QPSK	Main1	20	23.0	22.98	0.18	Top	1	50	0	1:1.58	Inactive	26	0.088	1.005	0.088	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 66 Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Sensor	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)											
1 770	132572	QPSK	Main1	20	13.0	11.37	0.16	Rear	0	1	99	1:1	Active	0	0.276	1.455	0.402	
1 770	132572	QPSK	Main1	20	13.0	11.43	0.18	Rear	0	50	25	1:1	Active	0	0.279	1.435	0.400	
1 770	132572	QPSK	Main1	20	19.0	17.51	0.15	Left	0	1	99	1:1	Active	0	0.157	1.409	0.221	
1 770	132572	QPSK	Main1	20	19.0	17.53	0.10	Left	0	50	49	1:1	Active	0	0.192	1.403	0.269	
1 770	132572	QPSK	Main1	20	19.0	17.51	0.12	Right	0	1	99	1:1	Active	0	0.098	1.409	0.138	
1 770	132572	QPSK	Main1	20	19.0	17.53	0.14	Right	0	50	49	1:1	Active	0	0.105	1.403	0.147	
1 770	132572	QPSK	Main1	20	13.0	11.37	-0.16	Top	0	1	99	1:1	Active	0	0.379	1.455	0.551	
1 770	132572	QPSK	Main1	20	13.0	11.43	-0.17	Top	0	50	25	1:1	Active	0	0.393	1.435	0.564	B13
1 770	132572	QPSK	Main1	20	24.0	23.45	-0.13	Rear	0	1	99	1:1	Inactive	21	0.218	1.135	0.247	
1 770	132572	QPSK	Main1	20	23.0	22.44	-0.18	Rear	1	50	49	1:1	Inactive	21	0.163	1.138	0.185	
1 770	132572	QPSK	Main1	20	24.0	23.45	0.06	Left	0	1	99	1:1	Inactive	10	0.104	1.135	0.118	
1 770	132572	QPSK	Main1	20	23.0	22.44	-0.06	Left	1	50	49	1:1	Inactive	10	0.081	1.138	0.092	
1 770	132572	QPSK	Main1	20	24.0	23.45	0.14	Right	0	1	99	1:1	Inactive	11	0.079	1.135	0.090	
1 770	132572	QPSK	Main1	20	23.0	22.44	0.16	Right	1	50	49	1:1	Inactive	11	0.063	1.138	0.072	
1 770	132572	QPSK	Main1	20	24.0	23.45	0.12	Top	0	1	99	1:1	Inactive	26	0.283	1.135	0.321	
1 770	132572	QPSK	Main1	20	23.0	22.44	0.16	Top	1	50	49	1:1	Inactive	26	0.213	1.138	0.242	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 66 (ENDC) Body SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Sensor	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaled SAR (W/kg)	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)											
1 720	132072	QPSK	Sub2	20	12.0	11.05	-0.19	Rear	0	1	0	1:1	Active	0	0.451	1.245	0.561	B14
1 720	132072	QPSK	Sub2	20	12.0	11.13	-0.16	Rear	0	50	0	1:1	Active	0	0.434	1.222	0.530	
1 720	132072	QPSK	Sub2	20	12.0	11.05	-0.12	Bottom	0	1	0	1:1	Active	0	0.336	1.245	0.418	
1 720	132072	QPSK	Sub2	20	12.0	11.13	-0.10	Bottom	0	50	0	1:1	Active	0	0.340	1.222	0.415	
1 770	132572	QPSK	Sub2	20	24.0	23.59	-0.13	Rear	0	1	0	1:1	Inactive	11	0.359	1.099	0.396	
1 770	132572	QPSK	Sub2	20	23.0	22.55	-0.11	Rear	1	50	0	1:1	Inactive	11	0.332	1.109	0.369	
1 770	132572	QPSK	Sub2	20	24.0	23.59	-0.16	Left	0	1	0	1:1	N/A	0	0.123	1.099	0.135	
1 770	132572	QPSK	Sub2	20	23.0	22.55	-0.10	Left	1	50	0	1:1	N/A	0	0.106	1.109	0.118	
1 770	132572	QPSK	Sub2	20	24.0	23.59	-0.08	Right	0	1	0	1:1	N/A	0	0.230	1.099	0.253	
1 770	132572	QPSK	Sub2	20	23.0	22.55	-0.17	Right	1	50	0	1:1	N/A	0	0.173	1.109	0.192	
1 770	132572	QPSK	Sub2	20	24.0	23.59	0.07	Bottom	0	1	0	1:1	Inactive	14	0.327	1.099	0.360	
1 770	132572	QPSK	Sub2	20	23.0	22.55	0.01	Bottom	1	50	0	1:1	Inactive	14	0.259	1.109	0.288	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

NR FDD Band n5 Body SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
836.5	167300	DFT-s QPSK	Main1	20	15.0	14.03	-0.18	Rear	0	1	53	1:1	Active	0	0.316	1.250	0.395	
836.5	167300	DFT-s QPSK	Main1	20	15.0	13.99	-0.14	Rear	0	50	0	1:1	Active	0	0.308	1.262	0.389	
836.5	167300	DFT-s QPSK	Main1	20	15.0	14.03	-0.01	Top	0	1	53	1:1	Active	0	0.369	1.250	0.461	
836.5	167300	DFT-s QPSK	Main1	20	15.0	13.99	-0.10	Top	0	50	0	1:1	Active	0	0.351	1.262	0.443	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.14	-0.17	Rear	0	1	1	1:1	Inactive	21	0.412	1.219	0.502	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.12	-0.19	Rear	0	50	28	1:1	Inactive	21	0.424	1.225	0.519	B15
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.14	-0.18	Left	0	1	1	1:1	N/A	0	0.096	1.219	0.117	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.12	-0.14	Left	0	50	28	1:1	N/A	0	0.135	1.225	0.165	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.14	-0.19	Right	0	1	1	1:1	N/A	0	0.312	1.219	0.380	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.12	-0.17	Right	0	50	28	1:1	N/A	0	0.280	1.225	0.343	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.14	-0.11	Top	0	1	1	1:1	Inactive	26	0.307	1.219	0.374	
836.5	167300	DFT-s QPSK	Main1	20	25.0	24.12	-0.11	Top	0	50	28	1:1	Inactive	26	0.269	1.225	0.330	
836.5	167300	CP QPSK	Main1	20	23.5	22.68	-0.15	Rear	1.5	1	1	1:1	Inactive	21	0.325	1.208	0.393	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

NR FDD Band n26 Body SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
831.5	166300	DFT-s QPSK	Main1	20	15.0	13.92	-0.13	Rear	0	1	1	1:1	Active	0	0.309	1.282	0.396	
831.5	166300	DFT-s QPSK	Main1	20	15.0	13.91	-0.19	Rear	0	50	0	1:1	Active	0	0.304	1.285	0.391	
831.5	166300	DFT-s QPSK	Main1	20	23.0	21.91	-0.15	Left	0	1	53	1:1	Active	0	0.055	1.285	0.071	
831.5	166300	DFT-s QPSK	Main1	20	23.0	21.90	0.16	Left	0	50	0	1:1	Active	0	0.057	1.288	0.073	
831.5	166300	DFT-s QPSK	Main1	20	23.0	21.91	0.17	Right	0	1	53	1:1	Active	0	0.077	1.285	0.099	
831.5	166300	DFT-s QPSK	Main1	20	23.0	21.90	0.12	Right	0	50	0	1:1	Active	0	0.075	1.288	0.097	
831.5	166300	DFT-s QPSK	Main1	20	15.0	13.92	-0.18	Top	0	1	1	1:1	Active	0	0.350	1.282	0.449	
831.5	166300	DFT-s QPSK	Main1	20	15.0	13.91	-0.10	Top	0	50	0	1:1	Active	0	0.349	1.285	0.448	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.42	-0.11	Rear	0	1	53	1:1	Inactive	21	0.399	1.439	0.574	B16
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.54	-0.17	Rear	0	50	28	1:1	Inactive	21	0.395	1.400	0.553	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.42	-0.09	Left	0	1	53	1:1	Inactive	10	0.023	1.439	0.033	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.54	0.00	Left	0	50	28	1:1	Inactive	10	0.024	1.400	0.034	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.42	0.11	Right	0	1	53	1:1	Inactive	11	0.048	1.439	0.069	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.54	0.06	Right	0	50	28	1:1	Inactive	11	0.051	1.400	0.071	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.42	-0.18	Top	0	1	53	1:1	Inactive	26	0.301	1.439	0.433	
831.5	166300	DFT-s QPSK	Main1	20	25.0	23.54	-0.19	Top	0	50	28	1:1	Inactive	26	0.289	1.400	0.405	
831.5	166300	CP QPSK	Main1	20	23.5	21.84	-0.16	Rear	1.5	1	1	1:1	Inactive	21	0.274	1.466	0.402	
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 SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 592.99	518598	DFT-s QPSK	Main1	100	10.0	8.95	0.19	Rear	0	1	1	1:1	Active	0	0.287	1.274	0.366	
2 592.99	518598	DFT-s QPSK	Main1	100	10.0	8.99	0.17	Rear	0	135	0	1:1	Active	0	0.283	1.262	0.357	
2 592.99	518598	DFT-s QPSK	Main1	100	10.0	8.95	0.11	Top	0	1	1	1:1	Active	0	0.335	1.274	0.427	B17
2 592.99	518598	DFT-s QPSK	Main1	100	10.0	8.99	0.17	Top	0	135	0	1:1	Active	0	0.332	1.262	0.419	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.45	-0.02	Rear	0	1	271	1:1	Inactive	21	0.053	1.135	0.060	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.12	0.07	Rear	0	135	138	1:1	Inactive	21	0.062	1.225	0.076	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.45	0.18	Left	0	1	271	1:1	Inactive	0	0.098	1.135	0.111	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.12	0.18	Left	0	135	138	1:1	Inactive	0	0.249	1.225	0.305	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.45	0.18	Right	0	1	271	1:1	Inactive	0	0.268	1.135	0.304	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.12	0.19	Right	0	135	138	1:1	Inactive	0	0.266	1.225	0.326	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.45	0.00	Top	0	1	271	1:1	Inactive	26	0.000	1.135	0.000	
2 592.99	518598	DFT-s QPSK	Main1	100	20.0	19.12	-0.03	Top	0	135	138	1:1	Inactive	26	0.074	1.225	0.091	
2 592.99	518598	CP QPSK	Main1	100	10.0	8.96	0.17	Top	0	1	1	1:1	Active	0	0.329	1.271	0.418	
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	0.10	Rear	0	1	137	1:1	N/A	0	0.700	1.127	0.789	B18
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	-0.19	Left	0	1	137	1:1	N/A	0	0.00558	1.127	0.006	
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	-0.18	Right	0	1	137	1:1	N/A	0	0.045	1.127	0.051	
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	-0.10	Bottom	0	1	137	1:1	N/A	0	0.539	1.127	0.607	
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	0.00	Rear	0	1	137	1:1	N/A	0	0.275	1.127	0.310	#
2 592.99	518598	DFT-s QPSK	Sub2	100	11.0	10.48	-0.15	Rear	0	1	137	1:1	N/A	0	0.160	1.127	0.180	##
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	0.14	Rear	0	1	137	1:1	N/A	0	0.722	1.084	0.783	B19
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	0.16	Left	0	1	137	1:1	N/A	0	0.071	1.084	0.077	
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	-0.18	Right	0	1	137	1:1	N/A	0	0.000888	1.084	0.001	
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	0.18	Bottom	0	1	137	1:1	N/A	0	0.203	1.084	0.220	
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	0.14	Rear	0	1	137	1:1	N/A	0	0.215	1.084	0.233	#
2 592.99	518598	DFT-s QPSK	Sub4	100	11.0	10.65	-0.17	Rear	0	1	137	1:1	N/A	0	0.123	1.084	0.133	##
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	-0.12	Rear	0	1	137	1:1	N/A	0	0.285	1.432	0.408	
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	0.14	Left	0	1	137	1:1	N/A	0	0.292	1.432	0.418	B20
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	0.19	Right	0	1	137	1:1	N/A	0	0.00068	1.432	0.001	
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	-0.17	Bottom	0	1	137	1:1	N/A	0	0.129	1.432	0.185	
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	-0.12	Left	0	1	137	1:1	N/A	0	0.182	1.432	0.261	#
2 592.99	518598	DFT-s QPSK	Sub1	100	11.0	9.44	-0.13	Left	0	1	137	1:1	N/A	0	0.055	1.432	0.079	##

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

Body
1.6 W/kg
Averaged over 1 gram

#: Tablet Mode with Cover Variant 1

##: Tablet Mode with Cover Variant 2

NR FDD Band n66 Body SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 745.0	349000	DFT-s QPSK	Main1	20	13.0	11.90	-0.12	Rear	0	1	1	1:1	Active	0	0.278	1.288	0.358	
1 745.0	349000	DFT-s QPSK	Main1	20	13.0	11.85	-0.18	Rear	0	50	0	1:1	Active	0	0.269	1.303	0.351	
1 745.0	349000	DFT-s QPSK	Main1	20	19.0	17.95	0.10	Left	0	1	1	1:1	Active	0	0.171	1.274	0.218	
1 745.0	349000	DFT-s QPSK	Main1	20	19.0	17.93	0.11	Left	0	50	0	1:1	Active	0	0.171	1.279	0.219	
1 745.0	349000	DFT-s QPSK	Main1	20	19.0	17.95	0.17	Right	0	1	1	1:1	Active	0	0.082	1.274	0.104	
1 745.0	349000	DFT-s QPSK	Main1	20	19.0	17.93	0.11	Right	0	50	0	1:1	Active	0	0.078	1.279	0.100	
1 745.0	349000	DFT-s QPSK	Main1	20	13.0	11.90	-0.17	Top	0	1	1	1:1	Active	0	0.397	1.288	0.511	
1 745.0	349000	DFT-s QPSK	Main1	20	13.0	11.85	-0.13	Top	0	50	0	1:1	Active	0	0.386	1.303	0.503	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.92	-0.18	Rear	0	1	1	1:1	Inactive	21	0.206	1.019	0.210	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.78	-0.12	Rear	0	50	28	1:1	Inactive	21	0.204	1.052	0.215	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.92	0.11	Left	0	1	1	1:1	Inactive	10	0.108	1.019	0.110	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.78	0.04	Left	0	50	28	1:1	Inactive	10	0.099	1.052	0.104	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.92	0.10	Right	0	1	1	1:1	Inactive	11	0.079	1.019	0.081	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.78	0.14	Right	0	50	28	1:1	Inactive	11	0.082	1.052	0.086	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.92	-0.14	Top	0	1	1	1:1	Inactive	26	0.194	1.019	0.198	
1 720.0	344000	DFT-s QPSK	Main1	20	24.0	23.78	-0.18	Top	0	50	28	1:1	Inactive	26	0.185	1.052	0.195	
1 745.0	349000	CP QPSK	Main1	20	13.0	11.86	0.18	Top	0	1	1	1:1	Inactive	0	0.428	1.300	0.556	B21
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

NR FDD Band n71 Body SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.56	-0.14	Rear	0	1	104	1:1	Active	0	0.415	1.393	0.578	
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.55	-0.14	Rear	0	50	56	1:1	Active	0	0.430	1.396	0.600	
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.56	-0.18	Top	0	1	104	1:1	Active	0	0.503	1.393	0.701	
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.55	-0.13	Top	0	50	56	1:1	Active	0	0.533	1.396	0.744	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.33	-0.12	Rear	0	1	53	1:1	Inactive	21	0.157	1.309	0.206	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.31	-0.15	Rear	0	50	28	1:1	Inactive	21	0.158	1.315	0.208	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.33	-0.13	Left	0	1	53	1:1	N/A	0	0.129	1.309	0.169	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.31	-0.15	Left	0	50	28	1:1	N/A	0	0.127	1.315	0.167	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.33	-0.13	Right	0	1	53	1:1	N/A	0	0.125	1.309	0.164	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.31	-0.13	Right	0	50	28	1:1	N/A	0	0.120	1.315	0.158	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.33	-0.16	Top	0	1	53	1:1	Inactive	26	0.133	1.309	0.174	
680.5	136100	DFT-s QPSK	Main1	20	25.5	24.31	-0.11	Top	0	50	28	1:1	Inactive	26	0.133	1.315	0.175	
680.5	136100	CP QPSK	Main1	20	17.0	15.33	-0.13	Top	0	1	1	1:1	Active	0	0.539	1.469	0.792	B22
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.55	-0.04	Top	0	50	56	1:1	Active	0	0.496	1.396	0.692	#
680.5	136100	DFT-s QPSK	Main1	20	17.0	15.55	0.00	Top	0	50	56	1:1	Active	0	0.460	1.396	0.642	##
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

Note:

#: Tablet Mode with Cover Variant 1

##: Tablet Mode with Cover Variant 2

NR TDD Band n77 Body SAR

Frequency		OFDM Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Sensor	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)							(mm)	(W/kg)			
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.41	0.00	Rear	0	1	271	1:1	Active	0	0.409	1.146	0.469	
3 750.0	650000	DFT-s QPSK	Main2	100	10.0	9.14	0.00	Rear	0	1	137	1:1	Active	0	0.507	1.219	0.618	
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.26	0.00	Rear	0	135	138	1:1	Active	0	0.403	1.186	0.478	
3 750.0	650000	DFT-s QPSK	Main2	100	10.0	9.14	0.00	Rear	0	135	69	1:1	Active	0	0.420	1.219	0.512	
3 750.0	650000	DFT-s QPSK	Main2	100	10.0	9.12	0.19	Rear	0	270	0	1:1	Active	0	0.398	1.225	0.488	
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.41	0.18	Right	0	1	271	1:1	Active	0	0.303	1.146	0.347	
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.26	0.14	Right	0	135	138	1:1	Active	0	0.339	1.186	0.402	
3 750.0	650000	DFT-s QPSK	Main2	100	10.0	9.14	0.14	Right	0	135	69	1:1	Active	0	0.453	1.219	0.552	
3 750.0	650000	DFT-s QPSK	Main2	100	10.0	9.12	0.14	Right	0	270	0	1:1	Active	0	0.456	1.225	0.559	
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.41	0.18	Bottom	0	1	271	1:1	Active	0	0.127	1.146	0.146	
3 930.0	662000	DFT-s QPSK	Main2	100	10.0	9.26	0.14	Bottom	0	135	138	1:1	Active	0	0.154	1.186	0.183	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.51	0.12	Rear	0	1	271	1:1	Inactive	20	0.043	1.119	0.048	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.31	-0.13	Rear	0	135	138	1:1	Inactive	20	0.063	1.172	0.074	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.51	0.16	Left	0	1	271	1:1	Inactive	0	0.00833	1.119	0.009	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.31	0.00	Left	0	135	138	1:1	Inactive	0	0.000	1.172	0.000	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.51	0.19	Right	0	1	271	1:1	Inactive	10	0.327	1.119	0.366	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.31	0.11	Right	0	135	138	1:1	Inactive	10	0.373	1.172	0.437	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.12	0.18	Right	0	270	0	1:1	Inactive	10	0.271	1.225	0.332	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.51	0.00	Bottom	0	1	271	1:1	Inactive	25	0.019	1.119	0.021	
3 930.0	662000	DFT-s QPSK	Main2	100	20.0	19.31	0.00	Bottom	0	135	138	1:1	Inactive	25	0.024	1.172	0.028	
3 500.01	633334	DFT-s QPSK	Main2	100	10.0	9.33	0.10	Rear	0	1	1	1:1	Active	0	0.571	1.167	0.666	B23
3 500.01	633334	DFT-s QPSK	Main2	100	10.0	9.40	-0.19	Rear	0	135	0	1:1	Active	0	0.561	1.148	0.644	
3 500.01	633334	DFT-s QPSK	Main2	100	10.0	9.27	-0.19	Rear	0	270	0	1:1	Active	0	0.514	1.183	0.608	
3 500.01	633334	CP QPSK	Main2	100	10.0	9.41	0.12	Rear	0	1	1	1:1	Inactive	0	0.353	1.146	0.405	
3 500.01	633334	DFT-s QPSK	Main2	100	10.0	9.33	0.10	Rear	0	1	1	1:1	Inactive	0	0.401	1.167	0.468	•
3500.01	633334	DFT-s QPSK	Main2	100	10.0	9.33	0.00	Rear	0	1	1	1:1	Active	0	0.128	1.167	0.149	#
3500.01	633334	DFT-s QPSK	Main2	100	10.0	9.33	0.00	Rear	0	1	1	1:1	Active	0	0.184	1.167	0.215	##
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: •• Power class 2

#: Tablet Mode with Cover Variant 1

##: Tablet Mode with Cover Variant 2

DTS Body SAR																		
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
2 437	6	802.11b	1	20	1	11.0	10.87	-0.07	Rear	98.9	Active	0	0.734	0.342	1.030	1.011	0.356	
2 437	6	802.11b	1	20	1	11.0	10.87	-0.14	Right	98.9	Active	0	0.537	0.239	1.030	1.011	0.249	
2 437	6	802.11b	1	20	1	11.0	10.87	0.12	Top	98.9	Active	0	0.173	0.109	1.030	1.011	0.114	
2 462	11	802.11b	1	20	1	19.0	18.35	0.08	Rear	98.9	Inactive	19	0.111	0.070	1.161	1.011	0.082	
2 462	11	802.11b	1	20	1	19.0	18.35	-0.19	Right	98.9	Inactive	11	0.37	0.231	1.161	1.011	0.271	
2 462	11	802.11b	1	20	1	19.0	18.35	0.02	Top	98.9	Inactive	22	0.0558	0.037	1.161	1.011	0.043	
2 437	6	802.11b	1+2	20	1	14.0	13.52	0.17	Rear	98.9	Active	0	0.904	0.382	1.227	1.011	0.474	
2 437	6	802.11b	1+2	20	1	14.0	13.52	-0.18	Left	98.9	Active	0	1.05	0.421	1.227	1.011	0.522	B24
2 437	6	802.11b	1+2	20	1	14.0	13.52	-0.16	Right	98.9	Active	0	0.549	0.235	1.227	1.011	0.292	
2 437	6	802.11b	1+2	20	1	14.0	13.52	-0.13	Top	98.9	Active	0	0.466	0.275	1.227	1.011	0.341	
2 462	11	802.11b	1+2	20	1	22.0	21.23	0.05	Rear	98.9	Inactive	19	0.105	0.065	1.233	1.011	0.081	
2 462	11	802.11b	1+2	20	1	22.0	21.23	-0.18	Left	98.9	Inactive	10	0.561	0.346	1.233	1.011	0.431	
2 462	11	802.11b	1+2	20	1	22.0	21.23	-0.15	Right	98.9	Inactive	11	0.210	0.130	1.233	1.011	0.162	
2 462	11	802.11b	1+2	20	1	22.0	21.23	-0.14	Top	98.9	Inactive	22	0.0547	0.037	1.233	1.011	0.046	
2 437	6	802.11b	1+2	20	1	14.0	13.52	-0.08	Rear	98.9	Active	0	0.440	0.337	1.117	1.011	0.381	#
2 437	6	802.11b	1+2	20	1	14.0	13.52	-0.18	Rear	98.9	Active	0	0.325	0.259	1.117	1.011	0.293	##
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg Averaged over 1 gram							

Note:

#: Tablet Mode with Cover Variant 1

##: Tablet Mode with Cover Variant 2

UNII1&2A Body SAR(SISO ANT2)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 290	58	802.11ac	2	80	MCS0	6.0	5.99	0.18	Rear	ON	87.0	0	1.27	0.503	1.002	1.149	0.579	B25
5 290	58	802.11ac	2	80	MCS0	6.0	5.99	0.18	Left	ON	87.0	0	1.25	0.457	1.002	1.149	0.526	
5 290	58	802.11ac	2	80	MCS0	6.0	5.99	0.00	Top	ON	87.0	0	0.123	0.031	1.002	1.149	0.036	
5 260	52	802.11a	2	20	6M	17.0	15.71	0.00	Rear	OFF	93.5	19	0.0987	0.046	1.346	1.070	0.066	
5 260	52	802.11a	2	20	6M	17.0	15.71	-0.17	Left	OFF	93.5	10	0.702	0.318	1.346	1.070	0.458	
5 260	52	802.11a	2	20	6M	17.0	15.71	-0.01	Top	OFF	93.5	25	0.0807	0.042	1.346	1.070	0.060	

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

Body
1.6 W/kg
Averaged over 1 gram

UNII1&2A Body SAR(MIMO)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 290	58	802.11ac	1+2	80	MCS0	9.0	8.98	0.12	Rear	ON	87.0	0	0.434	0.304	1.012	1.149	0.354	
5 290	58	802.11ac	1+2	80	MCS0	9.0	8.98	0.15	Left	ON	87.0	0	0.864	0.277	1.012	1.149	0.322	
5 290	58	802.11ac	1+2	80	MCS0	9.0	8.98	0.11	Right	ON	87.0	0	0.802	0.267	1.012	1.149	0.311	
5 290	58	802.11ac	1+2	80	MCS0	9.0	8.98	0.10	Top	ON	87.0	0	0.181	0.054	1.012	1.149	0.063	
5 260	52	802.11a	1+2	20	6M	20.0	18.87	-0.19	Rear	OFF	93.5	19	0.861	0.041	1.346	1.070	0.059	
5 260	52	802.11a	1+2	20	6M	20.0	18.87	-0.02	Left	OFF	93.5	10	0.666	0.289	1.346	1.070	0.416	B29
5 260	52	802.11a	1+2	20	6M	20.0	18.87	0.17	Right	OFF	93.5	11	0.629	0.284	1.346	1.070	0.409	
5 260	52	802.11a	1+2	20	6M	20.0	18.87	-0.18	Top	OFF	93.5	22	0.0629	0.029	1.346	1.070	0.042	

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

Body
1.6 W/kg
Averaged over 1 gram

UNII2C Body SAR(SISO ANT2)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	0.17	Rear	ON	87.0	0	1.75	0.808	1.007	1.149	0.935	
5 610	122	802.11ac	2	80	MCS0	6.0	5.82	0	Rear	ON	87.0	0	0.14	0.412	1.042	1.149	0.493	
5 690	138	802.11ac	2	80	MCS0	6.0	5.91	0.18	Rear	ON	87.0	0	0.67	0.548	1.021	1.149	0.643	
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	0.19	Left	ON	87.0	0	0.989	0.380	1.007	1.149	0.440	
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	0	Top	ON	87.0	0	0.259	0.114	1.007	1.149	0.132	
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	0.19	Rear	ON	87.0	0	1.750	0.817	1.007	1.149	0.946	B26•
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	-0.19	Left	ON	87.0	0	0.116	0.089	1.007	1.149	0.103	#
5 530	106	802.11ac	2	80	MCS0	6.0	5.97	-0.17	Left	ON	87.0	0	0.058	0.026	1.007	1.149	0.030	##
5 720	144	802.11a	2	20	6M	17.0	15.62	-0.17	Rear	OFF	93.5	19	0.253	0.115	1.374	1.070	0.169	
5 720	144	802.11a	2	20	6M	17.0	15.62	-0.12	Left	OFF	93.5	10	0.942	0.415	1.374	1.070	0.610	
5 720	144	802.11a	2	20	6M	17.0	15.62	0	Top	OFF	93.5	25	0.183	0.082	1.374	1.070	0.121	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram								

Note: • Measurement validity Repeat

#: Laptop Mode with Cover Variant 1

##: Laptop Mode with Cover Variant 2

UNII2C Body SAR(MIMO)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	0.19	Rear	ON	87.0	0	1.7	0.922	1.054	1.149	1.117	B30
5 610	122	802.11ac	1+2	80	MCS0	9.0	8.54	0.18	Rear	ON	87.0	0	2.72	0.718	1.197	1.149	0.988	
5 690	138	802.11ac	1+2	80	MCS0	9.0	8.44	0.12	Rear	ON	87.0	0	1.19	0.681	1.291	1.149	1.011	
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	0.18	Left	ON	87.0	0	0.913	0.368	1.054	1.149	0.446	
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	0.16	Right	ON	87.0	0	1.1	0.339	1.054	1.149	0.411	
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	0.00	Top	ON	87.0	0	0.173	0.039	1.054	1.149	0.047	
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	0.19	Rear	ON	87.0	0	1.83	0.916	1.054	1.149	1.110	•
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	-0.13	Rear	ON	87.0	0	0.841	0.638	1.054	1.149	0.773	#
5 530	106	802.11ac	1+2	80	MCS0	9.0	8.88	-0.19	Rear	ON	87.0	0	0.319	0.244	1.054	1.149	0.296	##
5 720	144	802.11a	1+2	20	6M	20.0	18.89	-0.14	Rear	OFF	93.5	19	0.213	0.092	1.374	1.070	0.135	
5 720	144	802.11a	1+2	20	6M	20.0	18.89	-0.14	Left	OFF	93.5	10	0.652	0.277	1.374	1.070	0.407	
5 720	144	802.11a	1+2	20	6M	20.0	18.89	-0.19	Right	OFF	93.5	11	0.536	0.229	1.374	1.070	0.337	
5 720	144	802.11a	1+2	20	6M	20.0	18.89	0.05	Top	OFF	93.5	22	0.108	0.046	1.374	1.070	0.068	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram								

Note: • Measurement validity Repeat

#: Tablet Mode with Cover Variant 1

##: Tablet Mode with Cover Variant 2

UNI3 Body SAR(SISO ANT2)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 775	155	802.11ac	2	80	MCS0	6.0	5.13	0.12	Rear	ON	87.0	0	0.824	0.573	1.222	1.149	0.805	B27
5 775	155	802.11ac	2	80	MCS0	6.0	5.13	0.19	Left	ON	87.0	0	0.717	0.273	1.222	1.149	0.383	
5 775	155	802.11ac	2	80	MCS0	6.0	5.13	-0.19	Top	ON	87.0	0	0.241	0.062	1.222	1.149	0.087	
5 825	165	802.11a	2	20	6M	17.0	15.63	0.13	Rear	OFF	93.5	19	0.326	0.142	1.371	1.070	0.208	
5 825	165	802.11a	2	20	6M	17.0	15.63	-0.12	Left	OFF	93.5	10	0.508	0.219	1.371	1.070	0.321	
5 825	165	802.11a	2	20	6M	17.0	15.63	-0.15	Top	OFF	93.5	25	0.192	0.081	1.371	1.070	0.119	

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

Body
1.6 W/kg
Averaged over 1 gram

UNI3 Body SAR(MIMO)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 775	155	802.11ac	1+2	80	MCS0	9.0	7.66	0.17	Rear	ON	87.0	0	1.32	0.477	1.542	1.149	0.845	B31
5 775	155	802.11ac	1+2	80	MCS0	9.0	7.66	0.17	Left	ON	87.0	0	0.765	0.254	1.542	1.149	0.450	
5 775	155	802.11ac	1+2	80	MCS0	9.0	7.66	0.10	Right	ON	87.0	0	0.847	0.263	1.542	1.149	0.466	
5 775	155	802.11ac	1+2	80	MCS0	9.0	7.66	0.00	Top	ON	87.0	0	0.116	0.035	1.542	1.149	0.062	
5 825	165	802.11a	1+2	20	6M	20.0	19.22	-0.18	Rear	OFF	93.5	19	0.214	0.092	1.371	1.070	0.135	
5 825	165	802.11a	1+2	20	6M	20.0	19.22	-0.18	Left	OFF	93.5	10	0.316	0.137	1.371	1.070	0.201	
5 825	165	802.11a	1+2	20	6M	20.0	19.22	-0.08	Right	OFF	93.5	11	0.425	0.182	1.371	1.070	0.267	
5 825	165	802.11a	1+2	20	6M	20.0	19.22	0.00	Top	OFF	93.5	22	0.0923	0.045	1.371	1.070	0.066	

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

Body
1.6 W/kg
Averaged over 1 gram

UNII4 Body SAR(SISO ANT2)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 855	171	802.11ac	2	80	MCS0	6.0	4.76	0.18	Rear	ON	87.0	0	0.885	0.467	1.330	1.149	0.714	B28
5 855	171	802.11ac	2	80	MCS0	6.0	4.76	0.14	Left	ON	87.0	0	0.592	0.199	1.330	1.149	0.304	
5 855	171	802.11ac	2	80	MCS0	6.0	4.76	-0.18	Top	ON	87.0	0	0.0823	0.034	1.330	1.149	0.052	
5 825	177	802.11a	2	20	6M	17.0	15.71	0.16	Rear	OFF	93.5	19	0.352	0.153	1.346	1.070	0.220	
5 825	177	802.11a	2	20	6M	17.0	15.71	-0.19	Left	OFF	93.5	10	0.471	0.206	1.346	1.070	0.297	
5 825	177	802.11a	2	20	6M	17.0	15.71	-0.14	Top	OFF	93.5	25	0.172	0.078	1.346	1.070	0.112	

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

Body
1.6 W/kg
Averaged over 1 gram

UNII4 Body SAR(MIMO)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 855	171	802.11ac	1+2	80	MCS0	9.0	7.79	0.19	Rear	ON	87.0	0	0.726	0.558	1.330	1.149	0.853	B32
5 855	171	802.11ac	1+2	80	MCS0	9.0	7.79	0.01	Left	ON	87.0	0	0.569	0.178	1.330	1.149	0.272	
5 855	171	802.11ac	1+2	80	MCS0	9.0	7.79	0.14	Right	ON	87.0	0	0.718	0.222	1.330	1.149	0.339	
5 855	171	802.11ac	1+2	80	MCS0	9.0	7.79	0.00	Top	ON	87.0	0	0.144	0.034	1.330	1.149	0.052	
5 845	169	802.11a	1+2	20	6M	20.0	18.90	-0.12	Rear	OFF	93.5	19	0.179	0.080	1.358	1.070	0.116	
5 845	169	802.11a	1+2	20	6M	20.0	18.90	-0.14	Left	OFF	93.5	10	0.291	0.128	1.358	1.070	0.186	
5 845	169	802.11a	1+2	20	6M	20.0	18.90	-0.10	Right	OFF	93.5	11	0.373	0.160	1.358	1.070	0.232	
5 845	169	802.11a	1+2	20	6M	20.0	18.90	0.13	Top	OFF	93.5	22	0.086	0.038	1.358	1.070	0.055	

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

Body
1.6 W/kg
Averaged over 1 gram

5 GHz WLAN Body SAR (MIMO/ ANT1)

Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Sensor	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																	
5 290	58	802.11ac	1	80	MCS0	6.0	5.95	0.10	Rear	ON	87.0	0	0.558	0.126	1.012	1.149	0.147	
5 530	106	802.11ac	1	80	MCS0	6.0	5.77	0.11	Rear	ON	87.0	0	0.282	0.074	1.054	1.149	0.090	
5 775	155	802.11ac	1	80	MCS0	6.0	4.12	0.00	Rear	ON	87.0	0	0.638	0.141	1.542	1.149	0.250	B33
5 855	171	802.11ac	1	80	MCS0	6.0	4.81	0.00	Rear	ON	87.0	0	0.321	0.128	1.315	1.149	0.193	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram								

DSS Tethering SAR

Frequency		Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Sensor	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.													
2 441	39	DH-5	1	13.0	12.9	-0.11	Rear	Active	0	0.255	1.023	1.012	0.264	B34
2 441	39	DH-5	1	13.0	12.9	0.12	Right	Active	0	0.246	1.023	1.012	0.255	
2 441	39	DH-5	1	13.0	12.9	0.15	Top	Active	0	0.107	1.023	1.012	0.111	
2 441	39	DH-5	1	17.0	16.38	0.00	Rear	Inactive	19	0.00643	1.153	1.012	0.008	
2 441	39	DH-5	1	17.0	16.38	0.15	Right	Inactive	11	0.027	1.153	1.012	0.032	
2 441	39	DH-5	1	17.0	16.38	-0.11	Top	Inactive	22	0.024	1.153	1.012	0.028	
ANSI/IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg Averaged over 1 gram				

13.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. 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.
7. 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.
8. Additional Cover was tested on the worst configuration of each antenna.

GSM/GPRS Test Notes:

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

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:
When the reported SAR is 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel. Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0 for some modes.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink CA was not activated.
9. SAR test reduction is applied using the following criteria:
Start with the largest channel Bandwidth and measure SAR for QPSK with 1 RB, and 50 % RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50 % RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel Bandwidths is not required because the reported SAR for the highest channel Bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel Bandwidth.

NR Notes:

1. 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 Bands was performed separately using test mode (FTM) software.
3. More detailed specifications of the NR Bands are contained in the technical description document.
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power was evaluated for SAR tests.

WLAN Notes:

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10 g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement.
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode was not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1 g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel Bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. In the technical documentation, the maximum duty factor of the declared BT was applied to the SAR results. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.

14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 section 4.3.2 and IEEE 1528-2013 section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is $\leq 1.6\text{W/kg}$ for 1g SAR and $\leq 4\text{ W/kg}$ for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

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

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

14.1 Sub6 Antenna Groups

S.LSI Time average SAR(TAS) algorithm operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating either of below conditions for all exposure scenarios:

Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside TAS is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs. This device supports two sub6 AG: AG0 and AG1, with AG0 having 1 antenna (Main1 Ant) and AG1 having 4 antennas (Main 2 Ant, Sub1 Ant, Sub2 Ant, Sub4 Ant). The conditions are verified through the following criteria.

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

1) Sum of SAR criteria: Obtain the worst-case reported SAR for each antenna group (i.e., maximum reported SAR at Plimit (or Pmax when Plimit > Pmax) out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure, and demonstrate that the sum of these RF exposures meets

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

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

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

SPLSR criteria should be met for all antenna pair combinations of AG0 and AG1: these include all combinations of antenna groups, antennas, and frequency bands.

3) Combination of SPLSR & ER1+ER2 criteria: If SPLSR criteria for all the combinations of sub6 antenna groups in 2) is demonstrated to show that each AG is mutually exclusive from other AGs, and If SPLSR criteria evaluation and analysis is needed to determine compliance for a certain DSI configuration, SPLSR is performed by taking the highest reported ER for each of the supported technologies and bands per antenna, along with the peak ER locations. in the Highest Reported ER and Hotspot Location Section below for each RSI configuration.

For this device, AG1 is located at the bottom of the device and is identified in this report as the “lower ANT group”. Per April 2022 TCB Workshop Notes, AG0, WLAN, and the BT antennas are located at the top of the device and were summed together as the “upper ANT group” for hybrid SPLSR calculation. The minimum distance when considering all transmissions between lower ANT group and upper ANT group was considered when calculating the SPLSR. For lower ANT group (AG1), Y_max coordinate represents the worst case hotspot location that is closest to the upper ANT group (AG0 + WLAN + BT). Similarly, for upper ANT group (AG0 + WLAN + BT), Y_min coordinate represents the worst case hotspot location that is closest to lower ANT group (AG0). The following formula is used to calculate the SPLSR between lower ANT group and upper ANT group for each exposure configuration:

$$SPLSR = \frac{(\text{Upper ANT Group(AG0+WLAN+BT)} + \text{Lower ANT Group(AG1)})^{1.5}}{|Y_{max} - Y_{min}|}$$

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

AG0	
Main1	GSM850, GSM1900, UMTS 2/4/5, LTE5/12/13/25/26/41/66, NR n5/26/41/66/71

AG1	
Main 2	NR n77
Sub 1	NR n41 SRS3
Sub 2	LTE2/66, NR n41 SRS1
Sub 4	NR n41 SRS2

WLAN/BT	
WIFI1	WLAN 2.4 GHz, 5 GHz, Bluetooth
WIFI2	WLAN 2.4 GHz, 5 GHz

14.2 Body SAR Simultaneous Transmission Analysis

14.2.1 SAR Simultaneous Transmission Analysis at 0mm

The Maximum measurement result for AG0		
Position	Main1	Max.AG0
Rear	0.600	0.600
Left	0.532	0.532
Right	0.371	0.371
Top	0.792	0.792
Bottom		

The Maximum measurement result for AG1					
Position	Main2	Sub1	Sub2	Sub4	Max.AG1
Rear	0.666	0.408	0.789	0.783	0.789
Left		0.418	0.478	0.077	0.478
Right	0.559	0.001	0.253	0.001	0.559
Top					
Bottom	0.183	0.185	0.607	0.22	0.607

The measurement result for WLAN/ BT					
Position	WLAN2.4 GHz SISO(WIFI1)	WLAN2.4 GHz MIMO(WIFI1+2)	WLAN5 GHz SISO(WIFI2)	WLAN5 GHz MIMO(WIFI1+2)	Bluetooth (WIFI1)
Rear	0.356	0.474	0.946	1.117	0.264
Left		0.522	0.526	0.45	
Right	0.249	0.292		0.466	0.255
Top	0.114	0.341	0.132	0.063	0.111
Bottom					

AG0+AG1+WLAN/BT

Simultaneous Transmission Analysis for Body SAR							
Position	AG0+AG1+BT	AG0+AG1+ 2.4 GHz SISO	AG0+AG1+ 2.4 GHz MIMO	AG0+AG1+ 5 GHz SISO	AG0+AG1+ 5 GHz MIMO	AG0+AG1+ 5 GHz SISO+BT	AG0+AG1+ 5 GHz MIMO+BT
Rear	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1
Left	1.010	1.010	1.532	1.536	1.460	1.536	1.460
Right	1.290	1.284	1.327	1.035	1.501	1.290	See Sec. 14.3.2.1
Top	0.903	0.906	1.133	0.924	0.855	1.035	0.966
Bottom	0.607	0.607	0.607	0.607	0.607	0.607	0.607

14.2.1.1 Ant Group Simultaneous Transmission Analysis

AG0+WLAN/BT

Simultaneous Transmission Analysis for Body SAR							
Position	AG0+BT	AG0+2.4 GHz SISO	AG0+2.4 GHz MIMO	AG0+5 GHz SISO	AG0+5 GHz MIMO	AG0+5 GHz SISO+BT	AG0+5 GHz MIMO+BT
Rear	0.864	0.956	1.031	1.546	1.546	See Sec. 14.3.1.2	See Sec. 14.3.1.2
Right	0.731	0.725	0.768	0.476	0.476	0.731	1.197

AG1+WLAN/BT

Simultaneous Transmission Analysis for Body SAR							
Position	AG1+BT	AG1+2.4 GHz SISO	AG1+2.4 GHz MIMO	AG1+5 GHz SISO	AG1+5 GHz MIMO	AG1+5 GHz SISO+BT	AG1+5 GHz MIMO+BT
Rear	1.053	1.145	1.220	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1	See Sec. 14.3.1.1
Right	0.814	0.808	0.851	0.559	1.025	0.814	1.280

AG0+AG1

Simultaneous Transmission Analysis for Body SAR	
Position	AG0+AG1
Rear	1.389
Right	1.035

14.2.2 SAR Simultaneous Transmission Analysis at Max Distance

The Maximum measurement result for AG0		
Position	Main1	Max.AG0
Rear	0.574	0.574
Left	0.118	0.118
Right	0.130	0.130
Top	0.655	0.655
Bottom		

The Maximum measurement result for AG1					
Position	Main2	Sub1	Sub2	Sub4	Max.AG1
Rear	0.074		0.500		0.500
Left					
Right	0.437				0.437
Top					
Bottom	0.028		0.437		0.437

The measurement result for WLAN/ BT					
Position	WLAN2.4 GHz SISO(WIFI1)	WLAN2.4 GHz MIMO(WIFI1+2)	WLAN5 GHz SISO(WIFI2)	WLAN5 GHz MIMO(WIFI1+2)	Bluetooth (WIFI1)
Rear	0.082	0.081	0.220	0.135	0.008
Left		0.431	0.610	0.416	
Right	0.271	0.162		0.409	0.032
Top	0.043	0.046	0.121	0.068	0.028
Bottom					

AG0+AG1+WLAN/BT

Simultaneous Transmission Analysis for Body SAR	
Position	AG0+AG1+ WLAN/BT
Rear	1.294
Left	0.728
Right	1.008
Top	0.804
Bottom	0.437

14.3 SAR to Peak Location Separation Ratio (SPLSR)

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

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

Where:

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

SAR₂ is the highest measured or estimated SAR for the second of a pair of simultaneous

transmitting antennas, in the same test operating mode and exposure condition as the first

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

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

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

14.3.1 Body SAR (Rear) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
UMTS B5	Main 1	13.5	105.5	-205	0.518
UMTS B4	Main 1	24.0	99.5	-205	0.470
UMTS B2	Main 1	27.0	95.0	-205	0.371
GSM 850	Main 1	1.5	108.5	-205	0.541
GSM 1900	Main 1	25.5	92.0	-205	0.493
LTE B12(17)	Main 1	-18.0	104.0	-207	0.403
LTE B13	Main 1	-18.0	119.0	-207	0.260
LTE B25(2)	Main 1	33.0	117.5	-207	0.400
LTE B26(5)	Main 1	-18.0	105.5	-207	0.447
LTE B41(38)	Main 1	-21.0	104.0	-207	0.533
LTE B66(4)	Main 1	19.5	101.0	-207	0.402
NR n5	Main 1	9.0	120.5	-207	0.395
NR n26	Main 1	9.0	120.5	-207	0.396
NR n41	Main 1	-22.8	106.4	-205	0.366
NR n66	Main 1	33.0	116.0	-207	0.358
NR n71	Main 1	-12.0	118.0	-207	0.600

Ant Group 1

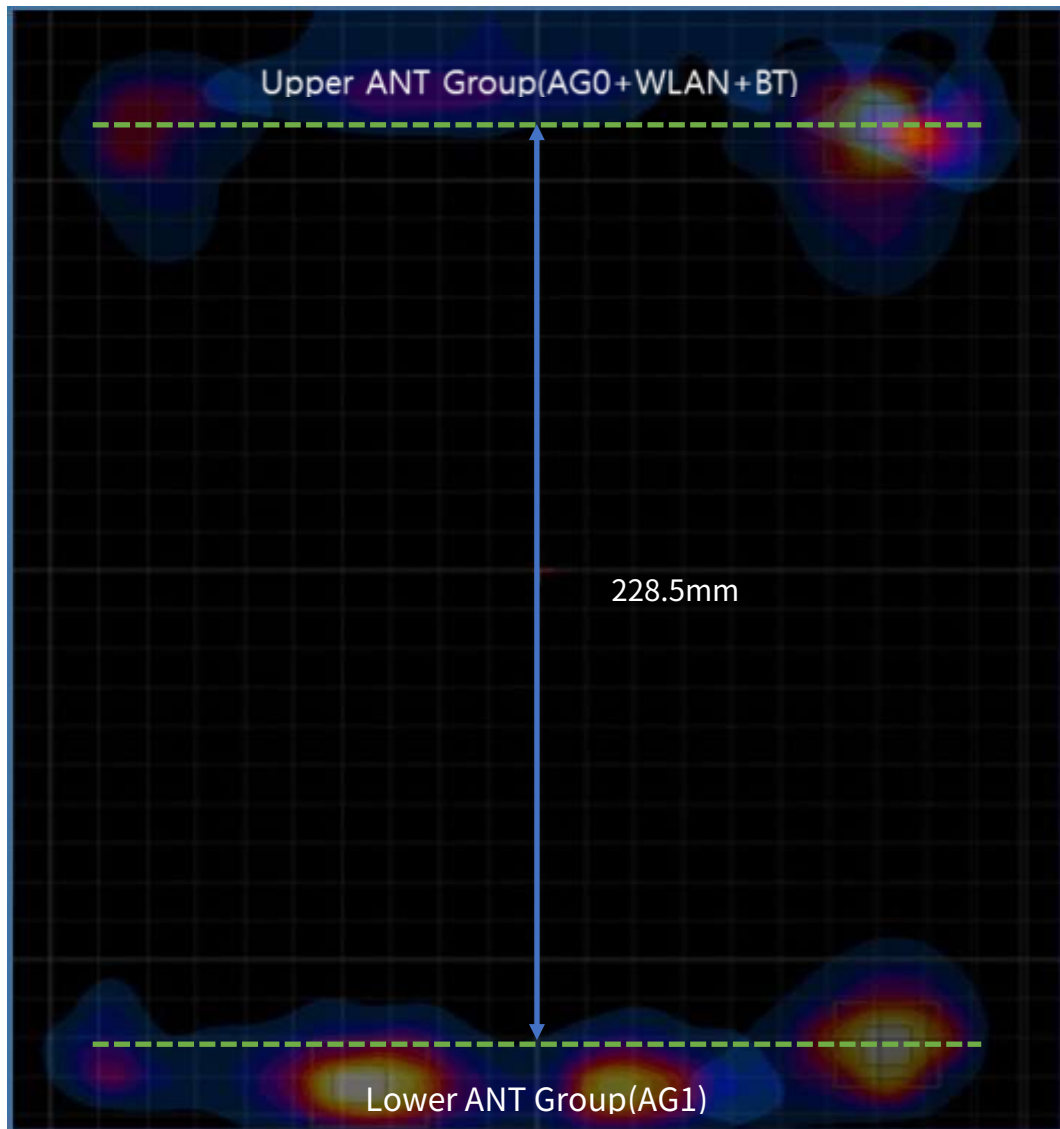
Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE B2	Sub 2	-21.0	-136.5	-207	0.500
LTE B66(4)	Sub 2	-21.0	-136.5	-207	0.561
NR n41 SRS1	Sub 2	-19.2	-140.0	-207	0.789
NR n41 SRS2	Sub 4	24.0	-152.0	-207	0.783
NR n41 SRS3	Sub 1	79.2	-162.8	-207	0.408
NR n77	Main 2	-75.6	-163.2	-208	0.666

WLAN/BT

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
BT	Ant.1	78.0	101.0	-207	0.264
WLAN 5 GHz	Ant.1	78.0	95.0	-207	0.250
WLAN 5 GHz	Ant.2	-70.0	98.0	-207	0.946
WLAN 5 GHz	Ant.1+2	-72.0	99.0	-207	1.117
WLAN 2.4 GHz	Ant.1	81.6	96.2	-207	0.356
WLAN 2.4 GHz	Ant.1+2	80.4	105.8	-207	0.474

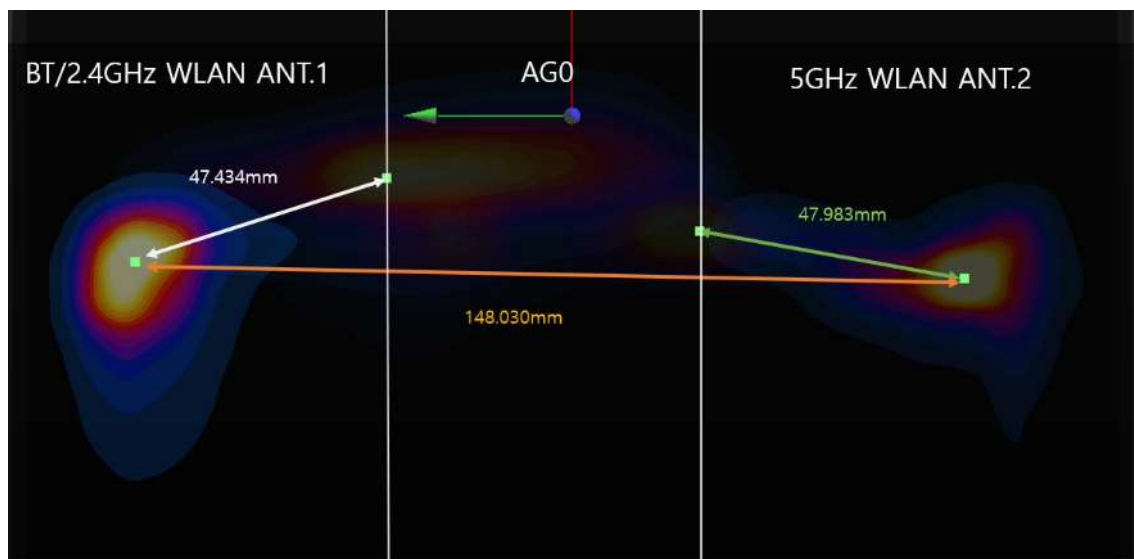
14.3.1.1 AG0+ AG1+WLAN/BT SPLSR

Mode/Band	Y-axis Distance(mm)	Sum of SAR [W/kg]	SPLSR
(AG0 + WLAN 5 GHz + BT) + AG1	228.5	2.867	0.02



14.3.1.2 AG0+WLAN/BT SPLSR

Mode/Band	Peak SAR Separation Distance (mm)	Sum of SAR [W/kg]	SPLSR
AG0 + WLAN 5 GHz(MIMO ANT2)	47.983	1.717	0.04
AG0 + (Bluetooth+ WLAN 5 GHz (MIMO ANT1))	47.434	1.085	0.02
WLAN 5 GHz (MIMO ANT2) + (Bluetooth+ WLAN 5 GHz (MIMO ANT1))	148.030	1.602	0.01



14.3.2 Body SAR (Right) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
UMTS B5	Main 1	138.5	-29.5	-205	0.238
UMTS B4	Main 1	134.5	-28.0	-205	0.276
UMTS B2	Main 1	134.5	-26.5	-205	0.289
GSM 850	Main 1	137.5	-26.5	-205	0.201
GSM 1900	Main 1	135.5	-26.5	-205	0.371
LTE B12(17)	Main 1	146.5	-9.5	-207	0.238
LTE B13	Main 1	140.5	-9.5	-207	0.476
LTE B25(2)	Main 1	142.0	-23.0	-207	0.187
LTE B26(5)	Main 1	136.0	-23.0	-207	0.277
LTE B41(38)	Main 1	130.6	-5.0	-206	0.156
LTE B66(4)	Main 1	137.5	-23.0	-207	0.147
NR n5	Main 1	145.0	-9.5	-207	0.380
NR n26	Main 1	143.5	-23.0	-207	0.099
NR n41	Main 1	133.8	-20.6	-205	0.326
NR n66	Main 1	137.0	-23.0	-207	0.104
NR n71	Main 1	145.0	-9.5	-207	0.164

Ant Group 1

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE B2	Sub 2	-122.5	-12.5	-206	0.299
LTE B66(4)	Sub 2	-127.0	-11.0	-207	0.253
NR n41 SRS1	Sub 2	-136.6	-7.4	-207	0.051
NR n41 SRS2	Sub 4	-107.8	14.2	-207	0.001
NR n41 SRS3	Sub 1	-87.4	-7.4	-207	0.001
NR n77	Main 2	-137.8	-21.8	-204	0.559

WLAN/BT

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
BT	Ant.1	143.8	-21.8	-207	0.255
WLAN 5 GHz	Ant.1+2	139.0	-18.0	-207	0.466

14.3.2.1 AG0+ AG1+WLAN/BT SPLSR

Mode/Band	X-axis Distance(mm)	Sum of SAR [W/kg]	SPLSR
(AG0 + WLAN 5 GHz + BT) + AG1	218.0	1.756	0.02



15. SAR Measurement Variability and Uncertainty

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

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

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.
- 2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0 W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg for 1g SAR or ≥ 3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 . 1.08

Body SAR measurement variability Results

Frequency		Band/Configuration	Position	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Ch					
5 530	106	802.11ac80 MIMO Ant1,2/MCS0	Rear	0.922	0.916	1.01
5 530	106	802.11ac80 SISO Ant2/MCS0	Rear	0.808	0.817	1.01

16. 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.

17. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	CS9spe-TX90	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
TESTO	175-H1/Thermometer	83348029	03/20/2025	Annual	03/20/2026
N/A	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli	CS8Cspeag-TX2-60	F/21/0029145/C/001	N/A	N/A	N/A
Staubli	CS9spe-TX2-60	F/21/0029145/A/001	N/A	N/A	N/A
TESTO	175-H1/Thermometer	83348028	03/20/2025	Annual	03/20/2026
N/A	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/55B8A1/C/01	N/A	N/A	N/A
Staubli	CS9spe-TX90	F07/55B8A1/A/01	N/A	N/A	N/A
TESTO	175-H1/Thermometer	83348021	03/20/2025	Annual	03/20/2026
N/A	Teach Pendant (Joystick)	S-0306	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F07/56W9A1/C/01	N/A	N/A	N/A
Staubli	CS9spe-TX90	F07/56W9A1/A/01	N/A	N/A	N/A
TESTO	175-H1/Thermometer	83406789	06/26/2024	Annual	06/26/2025
N/A	Teach Pendant (Joystick)	S-0602	N/A	N/A	N/A
Staubli	CS8Cspeag-TX60L	F10/5D1CA1/C/01	N/A	N/A	N/A
Staubli	TX60 Xlspeag	F10/5D1CA1/C/01	N/A	N/A	N/A
TESTO	175-H1/Thermometer	44606559906	03/20/2025	Annual	03/20/2026
N/A	Teach Pendant (Joystick)	S-0123	N/A	N/A	N/A
SPEAG	E-Field Probe EX3DV4	7702	01/21/2025	Annual	01/21/2026
SPEAG	E-Field Probe EX3DV4	7751	09/19/2024	Annual	09/19/2025
SPEAG	E-Field Probe EX3DV4	3968	10/29/2024	Annual	10/29/2025
SPEAG	E-Field Probe EX3DV4	3882	11/25/2024	Annual	11/25/2025
SPEAG	E-Field Probe EX3DV4	7681	11/22/2024	Annual	11/22/2025
SPEAG	E-Field Probe EX3DV4	7370	08/22/2024	Annual	08/22/2025
SPEAG	DAE4	1720	04/23/2025	Annual	04/23/2026
SPEAG	DAE4	1629	08/16/2024	Annual	08/16/2025
SPEAG	DAE4	648	04/17/2025	Annual	04/17/2026
SPEAG	DAE4	1866	05/22/2025	Annual	05/22/2026
SPEAG	DAE4	1254	05/21/2025	Annual	05/21/2026
SPEAG	Dipole D750V3	1122	02/22/2024	Biennial	02/22/2026
SPEAG	Dipole D835V2	4d165	04/14/2025	Annual	04/14/2026
SPEAG	Dipole D1800V2	2d015	04/17/2025	Annual	04/17/2026
SPEAG	Dipole D1900V2	5d061	01/20/2025	Annual	01/20/2026
SPEAG	Dipole D2450V2	1049	03/13/2025	Annual	03/13/2026
SPEAG	Dipole D2600V2	1106	04/15/2025	Annual	04/15/2026
SPEAG	Dipole D3500V2	1040	01/16/2025	Annual	01/16/2026
SPEAG	Dipole D3700V2	1105	09/18/2024	Annual	09/18/2025
SPEAG	Dipole D3900V2	1086	05/21/2024	Annual	05/21/2025
SPEAG	Dipole D3900V2	1019	05/21/2025	Annual	05/21/2026
SPEAG	Dipole D5 GHz V2	1107	04/19/2024	Biennial	04/19/2026
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Power Meter N1911A	MY45101406	05/21/2024	Annual	05/21/2025
Agilent	Power 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

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	DAKS 3.5	1038	01/20/2025	Annual	01/20/2026
SPEAG	Vector Reflectometer	0141013	01/13/2025	Annual	01/13/2026
KEYSIGHT	MXA Signal Analyzer	MY49100108	01/07/2025	Annual	01/07/2026
H.P	Network Analyzer /8753ES	JP39240221	12/23/2024	Annual	12/23/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2024	Annual	07/29/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/22/2024	Annual	05/22/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/20/2025	Annual	05/20/2026
R&S	Wireless Communication Test Set CMW500	115733	03/20/2025	Annual	03/20/2026
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/18/2025	Annual	03/18/2026
EMPOWER	RF Power Amplifier	1084	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-15N	10453	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-30N	-	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-60N	32011	09/11/2024	Annual	09/11/2025
Agilent	Attenuator (3dB) 8693B	MY39260298	08/20/2024	Annual	08/20/2025
HP	Attenuator (20dB) 8493C	09271	08/20/2024	Annual	08/20/2025
Agilent	Directional Bridge 86205A	3140A04581	04/18/2025	Annual	04/18/2026
Agilent	MXA Signal Analyzer N9020A	MY49100108	01/07/2025	Annual	01/07/2026
KEYSIGHT	EXG Vector Signal Generator	MY50350097	03/05/2025	Annual	03/05/2026
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 Tester MT8820C	6201074225	01/13/2025	Annual	01/13/2026
Anritsu	Radio Communication Tester MT8820C	6200695605	03/21/2025	Annual	03/21/2026
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2024	Annual	05/21/2025
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2025	Annual	05/21/2026
Anritsu	Radio Communication Tester MT8821C	6262044720	11/27/2024	Annual	11/27/2025
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/13/2025	Annual	01/13/2026

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

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

18. 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-FC015-P