

TEST REPORT

FCC SAR Part 1 Test for SM-A176U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2510-FC003-R1

DATE OF ISSUE
October 29, 2025

Tested by
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FCC ID

A3LSMA176U

Applicant

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

Product Name

Mobile Phone

Model Name

SM-A176U

Additional Model Name

SM-A176U1, SM-S176V

Date of Test

Sep. 01, 2025 ~ Oct. 23, 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	Oct 24, 2025	Initial Issue
1	Oct 29, 2025	LTE Band 4 Ant.F Remove

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 ***.

[If needed] The test results are subcontracted test results provided by OOOO.

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).

CONTENTS

1. Test Regulations.....	5
2. Test Location	6
3. Information of the EUT.....	6
4. Device Under Test Description	9
5. Introduction.....	34
6. Description of test equipment.....	35
7. SAR Measurement Procedure.....	36
8. Description of Test Position	38
9. RF Exposure Limits.....	43
10. FCC SAR General Measurement Procedures	44
11. Output Power Specifications.....	53
12. System Verification	125
13. SAR Test Data Summary	134
14. Simultaneous SAR Analysis	196
15. SAR Measurement Variability and Uncertainty	209
16. Measurement Uncertainty	210
17. SAR Test Equipment List.....	211
18. Conclusion	213
19. References	214
Appendix A. DUT Ant. Information & SETUP PHOTO.....	216
Appendix B. SAR Test Plots	
Appendix C. Dipole Verification Plots	
Appendix D. SAR Tissue Characterization	
Appendix E. SAR System Validation	
Appendix F. Probe Calibration Data	
Appendix G. Dipole Calibration Data	
Appendix H. Power reduction verification	
Appendix I. Pmax Conducted Power	
Appendix J. LTE bands Plimit Conducted Power	
Appendix K. NR Bands Plimit Conducted Power	

1. Test Regulations

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

- FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
- FCC KDB Publication 941225 D06 Hot Spot SAR v02r01
- FCC KDB Publication 941225 D05 SAR for LTE Devices v02r05
- FCC KDB Publication 941225 D05A LTE Rel.10 KDB Inquiry sheet v01r02
- FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB Publication 447498 D01 General RF Exposure Guidance v06
- FCC KDB Publication 648474 D04 Handset SAR v01r03
- FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- FCC KDB Publication 865664 D02 SAR Reporting v01r02
- FCC KDB Publication 690783 D01 SAR Listings on Grants v01r03
- FCC KDB Publication 971168 D01 Power Meas License Digital Systems v03r01

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

- October 2013 TCB Workshop Notes (GPRS testing criteria)
- October 2014 TCB Workshop Notes (Overlapping LTE Bands)
- April 2015 TCB Workshop Notes (Overlapping LTE Bands Test exclusion)
- April 2015 TCB Workshop Notes (Simultaneous transmission summation clarified)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- November 2017 TCBC Workshop Notes (LTE Carrier Aggregation)
- April 2018 TCBC Workshop Notes (LTE UL CA, DL CA SAR Test Exclusion)
- April 2022 TCBC Workshop Notes (Sum-Peak Location Separation Ratio)
- October 2024 TCBC Workshop Notes (CA-DL Test Reduction)

2. Test Location

2.1 Test Laboratory

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

2.2 Test Facilities

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

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

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-A176U
Additional Model Name	SM-A176U1, SM-S176V
Equipment Type	Mobile Phone
FCC ID	A3LSMA176U
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

3.2 Attestation of test result of device under test

The Highest Reported SAR						
Band	Tx. Frequency	Equipment Class	Reported SAR (W/kg)			
			1 g Head	1 g Body Worn	1 g Hotspot	10 g Extremity
GSM/GPRS/EDGE 850	824.2 MHz ~ 848.8 MHz	PCE	0.21	0.79	0.79	N/A
GSM/GPRS/EDGE 1900	1 850.2 MHz ~ 1 909.8 MHz	PCE	0.12	0.92	0.92	N/A
UMTS Band 5	826.4 MHz ~ 846.6 MHz	PCE	0.19	1.01	1.01	N/A
UMTS Band 4	1 712.4 MHz ~ 1 752.6 MHz	PCE	<0.10	1.13	1.13	N/A
UMTS Band 2	1 852.4 MHz ~ 1 907.6 MHz	PCE	0.11	1.19	1.19	N/A
LTE FDD Band 2 (PCS)	1 850.7 MHz ~ 1 909.3 MHz	PCE	0.50	0.37	0.37	N/A
LTE FDD Band 4 (AWS)	1 710.7 MHz ~ 1 754.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 5 (Cell)	824.7 MHz ~ 848.3 MHz	PCE	N/A	N/A	N/A	N/A
LTE FDD Band 7	2 502.5 MHz ~ 2 567.5 MHz	PCE	0.44	0.75	0.75	N/A
LTE FDD Band 12	699.7 MHz ~ 715.3 MHz	PCE	0.25	0.83	0.83	N/A
LTE FDD Band 13	779.5 MHz ~ 784.5 MHz	PCE	0.20	0.88	0.92	N/A
LTE FDD Band 14	790.5 MHz ~ 795.5 MHz	PCE	0.26	0.96	0.96	N/A
LTE FDD Band 25 (PCS)	1 850.7 MHz ~ 1 914.3 MHz	PCE	<0.10	0.66	0.74	N/A
LTE FDD Band 26 (Cell)	814.7 MHz ~ 848.3 MHz	PCE	0.27	1.09	1.09	N/A
LTE FDD Band 30	2 307.5 MHz ~ 2 312.5 MHz	PCE	0.25	0.78	0.78	N/A
LTE TDD Band 38	2 572.5 MHz ~ 2 617.5 MHz	PCE	N/A	N/A	N/A	N/A
LTE TDD Band 41	2 498.5 MHz ~ 2 687.5 MHz	PCE	0.24	1.04	1.04	N/A
LTE TDD Band 48	3 552.5 MHz ~ 3 697.5 MHz	CBE	0.16	0.41	0.41	N/A
LTE FDD Band 66 (AWS)	1 710.7 MHz ~ 1 779.3 MHz	PCE	0.72	0.48	0.60	N/A
LTE FDD Band 71	665.5 MHz ~ 695.5 MHz	PCE	0.19	0.60	0.60	N/A
NR FDD Band n2 (PCS)	1 852.5 MHz ~ 1 907.5 MHz	PCE	0.44	0.21	0.21	N/A
NR FDD Band n5	826.5 MHz ~ 846.5 MHz	PCE	0.30	1.08	1.08	N/A
NR FDD Band n25 (PCS)	1 852.5 MHz ~ 1 912.5 MHz	PCE	0.10	0.96	0.96	N/A
NR FDD Band n30	2 307.5 MHz ~ 2 312.5 MHz	PCE	0.24	0.83	0.83	N/A
NR TDD Band n41	2 501.01 MHz ~ 2 685 MHz	PCE	0.58	0.65	0.65	N/A
NR TDD Band n48	3 555 MHz ~ 3 695.01 MHz	CBE	0.31	0.62	0.62	N/A
NR FDD Band n66	1 712.5 MHz ~ 1 777.5 MHz	PCE	0.73	0.61	0.61	N/A
NR FDD Band n70	1 697.5 MHz ~ 1 707.5 MHz	PCE	0.20	1.18	1.18	N/A
NR FDD Band n71	665.5 MHz ~ 695.5 MHz	PCE	0.20	0.80	0.80	N/A
NR TDD Band n77	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCE	0.24	0.57	0.57	N/A
NR TDD Band n78	3 445.01 MHz ~ 3 544.98 MHz 3 705 MHz ~ 3 975 MHz	PCE	N/A	N/A	N/A	N/A
2.4 GHz WLAN	2 412 MHz ~ 2 462 MHz	DTS	0.30	0.48	0.48	N/A
U-NII-1	5 180 MHz ~ 5 240 MHz	NII	N/A	N/A	N/A	N/A
U-NII-2A	5 260 MHz ~ 5 320 MHz	NII	0.64	0.34	0.34	N/A
U-NII-2C	5 500 MHz ~ 5 720 MHz	NII	0.49	0.19	0.19	N/A
U-NII-3	5 745 MHz ~ 5 825 MHz	NII	0.44	0.15	0.15	N/A
U-NII-4	5 845 MHz ~ 5 885 MHz	NII	0.37	<0.10	0.10	N/A
Bluetooth	2 402 MHz ~ 2 480 MHz	DSS/DTS	0.11	0.26	0.26	N/A
NFC	13.56 MHz	DXX	N/A	N/A	N/A	<0.10
Simultaneous SAR per KDB 690783 D01v01r03			1.52	1.04	1.04	<0.10
Date(s) of Tests:		Sep. 01, 2025~ Oct. 16, 2025				

Summary table of SAR measurement results		
SAR test Configuration	The Highest SAR (W/kg)	Distance (mm)
Head SAR	0.73	
Body-worn accessory	1.19	5
Product specific(wireless router)	1.19	5
Simultaneous transmission analysis	1.52	

4. Device Under Test Description

4.1 DUT specification

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 7	Voice / Data	2 502.5 MHz ~ 2 567.5 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 14	Voice / Data	790.5 MHz ~ 795.5 MHz
LTE FDD Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE FDD Band 30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
LTE TDD Band 38	Voice / Data	2 572.5 MHz ~ 2 617.5 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE TDD Band 48	Voice / Data	3 552.5 MHz ~ 3 697.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
LTE FDD Band 71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR FDD Band n2 (PCS)	Voice / Data	1 852.5 MHz ~ 1 907.5 MHz
NR FDD Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n25 (PCS)	Voice / Data	1 852.5 MHz ~ 1 912.5 MHz
NR FDD Band n30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
NR TDD Band n41	Voice / Data	2 501.01 MHz ~ 2 685 MHz
NR TDD Band n48	Voice / Data	3 555 MHz ~ 3 695.01 MHz
NR FDD Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n70	Voice / Data	1 697.5 MHz ~ 1 707.5 MHz
NR FDD Band n71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Voice / Data	3 445.01 MHz ~ 3 544.98 MHz
NR TDD Band n78	Voice / Data	3 705 MHz ~ 3 795 MHz
NR TDD Band n78 DoD	Voice / Data	3 455.01 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
U-NII-4	Voice / Data	5 845 MHz ~ 5 885 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 462 MHz
Bluetooth / LE	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
Device Description		
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900, UMTS Band 2,4,5, NFC	YHM1118M
	LTE Band 2,4,5,7,12,13,14,25,26,30,66,71 NR Band n2,5,25,30,66,70,71	YHM1118M, YHM1181M
	LTE Band 41, 48 NR Band n41, n48, n77, n77 SRS 2	YHM1208M, YHM1165M
	NR Band n48 SRS2, 3, 4, n77 SRS3, 4	YHM1164M
	WLAN 2.4G, 5G, BT	YHM1221M, YHM1115M
	The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.	

4.2 Time-Averaging Algorithm for RF Exposure Compliance

This WWAN/ WWAN/WLAN/BT 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 /WLAN Mode to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement.

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 S.LSI TAS algorithms, implemented in WWAN and WLAN modes respectively, are independent and always comply with the FCC's RF exposure limit. Only the NFC mode of the device did not apply the time averaged SAR algorithm.

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 Head /Body SAR of WWAN/WLAN Mode) Note that the device uncertainty for WLAN/WWAN is 1.0dB for this DUT.

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

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

Plim values in green indicate Plimit < Pmax			Plim values in grey indicate Plimit > Pmax			
Plimit corresponding to 1.0 W/kg (1g) SAR_Design_target					Pmax	Pmax
SAR Exposure Position			Head	Body	Maximum Tune-up Output Power (Burst Average Power) [dBm]	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume			1g	1g		
separation Distance			0 mm	5 mm		
Mode	Band	Antenna	RSI=1	RSI=0		
GSM/GPRS/EDGE	850	A	22.8	22.8	31.5	25.3
GSM/GPRS/EDGE	1900	A	19.3	19.3	26.5	22.1
UMTS	2	A	19.0	19.0	24.0	24.0
UMTS	4	A	19.0	19.0	24.0	24.0
UMTS	5	A	23.5	23.5	24.0	24.0
LTE FDD	2	F	18.0	18.0	24.0	24.0
LTE FDD	7	A	27.6	18.0	23.0	23.0
LTE FDD	12	A	31.5	26.3	24.5	24.5
LTE FDD	13	A	32.0	25.4	24.0	24.0
LTE FDD	14	A	30.8	25.2	24.0	24.0
LTE FDD	2/25	A	20.0	19.0	24.0	24.0
LTE FDD	5/26	A	31.3	23.0	24.5	24.5
LTE FDD	30	A	28.5	19.0	21.5	21.5
LTE TDD	38/41	A	28.8	17.0	23.5	21.5
LTE TDD	48	G	14.0	14.0	21.0	19.0
LTE FDD	4/66	A	20.0	18.0	24.5	24.5
LTE FDD	66	F	18.0	18.0	24.5	24.5
LTE FDD	71	A	32.1	27.3	24.0	24.0
NR FDD	2	F	18.0	18.0	24.0	24.0
NR FDD	2/25	A	20.0	19.0	24.0	24.0
NR FDD	30	A	28.9	19.0	21.5	21.5
NR TDD	41	A	30.0	17.0	26.5	26.5
NR TDD	48	G	14.0	14.0	21.0	21.0
NR TDD SRS 2	48	I	9.0	9.0	17.5	17.5
NR TDD SRS 3	48	F	14.0	14.0	20.5	20.5
NR TDD SRS 4	48	H	9.0	9.0	17.0	17.0
NR FDD	5	A	31.1	23.0	24.5	24.5
NR FDD	66	A	20.0	18.0	24.5	24.5
NR FDD	66	F	18.0	18.0	24.5	24.5
NR FDD	70	A	32.0	21.0	24.0	24.0
NR FDD	71	A	32.3	26.0	24.0	24.0
NR TDD	77/78	G	13.0	13.0	26.5	26.5
NR TDD	77/78 DOD	G	13.0	13.0	26.5	26.5
NR TDD SRS 2	77/78	I	9.0	9.0	21.5	21.5
NR TDD SRS 2	77/78 DOD	I	9.0	9.0	21.5	21.5
NR TDD SRS 3	77/78	F	13.0	13.0	26.0	26.0
NR TDD SRS 3	77/78 DOD	F	13.0	13.0	26.0	26.0
NR TDD SRS 4	77/78	H	9.0	9.0	22.0	22.0
NR TDD SRS 4	77/78 DOD	H	9.0	9.0	22.0	22.0

Plim values in green indicate Plimit < Pmax			values in grey indicate Plimit > Pmax		
Plimit corresponding to 0.7 W/kg (1g) SAR_Design_target				Pmax	
SAR Exposure Position			Head	Body	Maximum Tune-up Output Power [dBm]
Averaging volume			1g	1g	
separation Distance			0 mm	5 mm	
Mode	Band	Antenna	RSI=1	RSI=0	
WLAN	2.4 GHz	F	18.0	15.0	19.5
WLAN	5 GHz	F	16.0	9.0	17.0
BT	2.4 GHz	F	20.9	17.2	12.0

Table 4-4 SAR Characterization

*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 2G/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/WLAN mode is controlled by the application of The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm, with the output Power depending on the RSI of the predefined DUT.

4.3.1 Nominal and Maximum Output Power Specifications

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

4.3.1.1 2G/3G/4G/5G Nominal Output Power

A. GSM Modes

GSM/GPRS/EDGE 850_Antenna A									
Power Level	Voice (dBm)	Data - Burst Average GMSK (dBm)				Data - Burst Average 8-PSK (dBm)			
	1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	22.0
Body (RSI = 0)	32.0	32.0	29.0	27.2	26.0	27.0	25.0	23.0	22.0
Head (RSI = 1)	32.0	32.0	29.0	27.2	26.0	27.0	25.0	23.0	22.0

GSM/GPRS/EDGE 1900_Antenna A									
Power Level	Voice (dBm)	Data - Burst Average GMSK (dBm)				Data - Burst Average 8-PSK (dBm)			
	1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
Pmax	29.5	29.5	28.0	26.5	24.5	26.0	24.0	22.0	21.0
Body (RSI = 0)	28.5	28.5	25.5	23.7	22.5	26.0	24.0	22.0	21.0
Head (RSI = 1)	28.5	28.5	25.5	23.7	22.5	26.0	24.0	22.0	21.0

Tolerance: -1.5 dB ~ +1.0 dB

B. UMTS Modes

UMTS Band 5 (850 MHz) _Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.0	23.0	23.0	23.0
FREE(RSI = 0) Body	23.5	22.5	21.0	22.5
RCV(RSI = 1) Head	23.5	22.5	21.0	22.5

UMTS Band 4 (1 750 MHz) _Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.0	23.0	23.0	23.0
FREE(RSI = 0) Body	19.0	18.5	18.0	18.0
RCV(RSI = 1) Head	19.0	18.5	18.0	18.0

UMTS Band 2 (1 900 MHz) _Antenna A				
Power Level	Modulated Average Output Power (dBm)			
	3GPP UMTS Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	24.0	23.0	23.0	23.0
FREE(RSI = 0) Body	19.0	18.5	18.0	18.0
RCV(RSI = 1) Head	19.0	18.5	18.0	18.0

Tolerance: -1.5 dB ~ +1.0 dB

C. LTE Modes

Mode / Band	Antenna	Modulated Average Output Power (dBm)		
		Pmax	Body (RSI = 0)	Head(RSI = 1)
LTE Band 2	M1 (A)	24.0	19.0	20.0
LTE Band 2	S2 (F)	24.0	18.0	18.0
LTE Band 4	M1 (A)	24.5	18.0	20.0
LTE Band 5	M1 (A)	24.5	23.0	24.5
LTE Band 7	M1 (A)	23.0	18.0	23.0
LTE Band 12	M1 (A)	24.5	24.5	24.5
LTE Band 13	M1 (A)	24.0	24.0	24.0
LTE Band 14	M1 (A)	24.0	24.0	24.0
LTE Band 25	M1 (A)	24.0	19.0	20.0
LTE Band 26	M1 (A)	24.5	23.0	24.5
LTE Band 30	M1 (A)	21.5	19.0	21.5
LTE Band 38 (PC3) duty 63%	M1 (A)	23.5	19.0	23.5
LTE Band 41 (PC3) duty 63%	M1 (A)	23.5	19.0	23.5
LTE Band 48	S3 (G)	21.0	16.0	16.0
LTE Band 66	M1 (A)	24.5	18.0	20.0
LTE Band 66	S2 (F)	24.5	18.0	18.0
LTE Band 71	M1 (A)	24.0	24.0	24.0

Tolerance: -1.5 dB ~ +1.0 dB

D. 5G NR SUB 6

Mode / Band	Antenna	Modulated Average Output Power (dBm)		
		Pmax	Body (RSI = 0)	Head(RSI = 1)
NR Band n2	M1 (A)	24.0	19.0	20.0
NR Band n2	S2 (F)	24.0	18.0	18.0
NR Band n5	M1 (A)	24.5	23.0	24.5
NR Band n25	M1 (A)	24.0	19.0	20.0
NR Band n30	M1 (A)	21.5	19.0	21.5
NR Band n41 PC2 duty 100%	M1 (A)	26.5	17.0	26.5
NR Band n48	S3 (G)	21.0	14.0	14.0
NR Band n48 SRS2 duty 100%	S5 (I)	17.5	9.0	9.0
NR Band n48 SRS3 duty 100%	S2 (F)	20.5	14.0	14.0
NR Band n48 SRS4 duty 100%	S4 (H)	17.0	9.0	9.0
NR Band n66	M1 (A)	24.5	18.0	20.0
NR Band n66	S2 (F)	24.5	18.0	18.0
NR Band n70	M1 (A)	24.0	21.0	24.0
NR Band n71	M1 (A)	24.0	24.0	24.0
NR Band n77 PC2	S3 (G)	26.5	13.0	13.0
NR Band n77 PC2 SRS2 duty 100%	S5 (I)	21.5	9.0	9.0
NR Band n77 PC2 SRS3 duty 100%	S2 (F)	26.0	13.0	13.0
NR Band n77 PC2 SRS4 duty 100%	S4 (H)	22.0	9.0	9.0
NR Band n78 PC2	S3 (G)	26.5	13.0	13.0
NR Band n78 PC2 SRS2 duty 100%	S5 (I)	21.5	9.0	9.0
NR Band n78 PC2 SRS3 duty 100%	S2 (F)	26.0	13.0	13.0
NR Band n78 PC2 SRS4 duty 100%	S4 (H)	22.0	9.0	9.0

Tolerance: -1.5 dB ~ +1.0 dB

4.3.1.2 Maximum 2.4 GHz, 5 GHz WIFI output power

a. Maximum Power

Mode	Band	SISO				
		a	b	g	n	ac
2.4GHz	2.45GHz		19.5	19 (CH1 : 17.5 CH11 : 18)	19 (CH1 : 17.5 CH11 : 18)	
5GHZ (20MHz)	UNII 1	17 (36ch : 16.5)			17 (36ch : 16.5)	17 (36ch : 16.5)
	UNII 2A	17 (64ch : 14.5)			17 (64ch : 14.5)	17 (64ch : 14.5)
	UNII 2C	17 (100ch : 13.5)			17 (100ch : TBD)	17 (100ch : 13.5)
	UNII 3	17			17	17
	UNII 4	17			17	17
5GHZ (40MHz)	UNII 1				15 (38ch : 12.5)	15 (38ch : 12.5)
	UNII 2A				15 (62ch : 11.5)	15 (62ch : 11.5)
	UNII 2C				15 (102ch : 10.5)	15 (102ch : 10.5)
	UNII 3				15	15
	UNII 4				15	15
5GHZ (80MHz)	UNII 1					9.5
	UNII 2A					9.5
	UNII 2C					9.5 (106ch : 7.5)
	UNII 3					9.5
	UNII 4					9.5

(Upper Tolerance: target +1.0 dB)

b. Reduced Power – Body SAR

Mode	Band	SISO				
		a	b	g	n	ac
2.4GHz	2.45GHz		15	15	15	
5GHZ (20MHz)	UNII 1	9			9	9
	UNII 2A	9			9	9
	UNII 2C	9			9	9
	UNII 3	9			9	9
	UNII 4	9			9	9
5GHZ (40MHz)	UNII 1				9	9
	UNII 2A				9	9
	UNII 2C				9	9
	UNII 3				9	9
	UNII 4				9	9
5GHZ (80MHz)	UNII 1					9
	UNII 2A					9
	UNII 2C					9 (106ch : 7.5)
	UNII 3					9
	UNII 4					9

(Upper Tolerance: target +1.0 dB)

c. Reduced Power – Head SAR

Mode	Band	SISO				
		a	b	g	n	ac
2.4GHz	2.45GHz		18	18 (CH1 : 17.5)	18 (CH1 : 17.5)	
5GHZ (20MHz)	UNII 1	16			16	16
	UNII 2A	16 (64ch : 14.5)			16 (64ch : 14.5)	16 (64ch : 14.5)
	UNII 2C	16 (100ch : 13.5)			16 (100ch : 13.5)	16 (100ch : 13.5)
	UNII 3	16			16	16
	UNII 4	16			16	16
5GHZ (40MHz)	UNII 1				15 (38ch : 12.5)	15 (38ch : 12.5)
	UNII 2A				15 (62ch : 11.5)	15 (62ch : 11.5)
	UNII 2C				15 (102ch : 10.5)	15 (102ch : 10.5)
	UNII 3				15	15
	UNII 4				15	15
5GHZ (80MHz)	UNII 1					9.5
	UNII 2A					9.5
	UNII 2C					9.5 (106ch : 7.5)
	UNII 3					9.5
	UNII 4					9.5

(Upper Tolerance: target +1.0 dB)

d. Bluetooth Maximum Conducted Output Power in Conducted Mode

a. Maximum Power

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

(Upper tolerance: target +1.0dB)

4.4 LTE Information

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

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

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High		
LTE FDD Band 66 (AWS)	1.4 MHz	1 710.7 (131979)		1 745 (132322)		1 779.3 (132665)		
	3 MHz	1 711.5 (131987)		1 745 (132322)		1 778.5 (132657)		
	5 MHz	1 712.5 (131997)		1 745 (132322)		1 777.5 (132647)		
	10 MHz	1 715.0 (132022)		1 745 (132322)		1 775.0 (132622)		
	15 MHz	1 717.5 (132047)		1 745 (132322)		1 772.5 (132597)		
	20 MHz	1 720.0 (132072)		1 745 (132322)		1 770.0 (132572)		
LTE FDD Band 71	5 MHz	665.5 (133147)		680.5 (133297)		695.5 (133447)		
	10 MHz	668 (133172)		680.5 (133297)		693 (133422)		
	15 MHz	670.5 (133197)		680.5 (133297)		690.5 (133397)		
	20 MHz			680.5 (133297)				
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)		
LTE TDD Band 48	5 MHz	3 552.5(55265)		3 600.8(55748)		3 649.2(56232)		3 697.5(56715)
	10 MHz	3 555(55290)		3 601.7(55757)		3 648.3(56223)		3 695(56690)
	15 MHz	3 557.5(55315)		3 602.5(55765)		3 647.5(56215)		3 692.5(56665)
	20 MHz	3 560(55340)		3 603.3(55773)		3 646.7(56207)		3 690(56640)
UE Category			LTE Rel. 16, DL: Category 20, UL: Category 18					
Modulations Supported in UL			QPSK, 16QAM, 64QAM, 256 QAM					
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3			Yes					
A-MPR disabled for SAR Testing.			Yes					
LTE Carrier Aggregation			This device supports Inter-Band & Intra-Band DL-link Carrier aggregations and Intra-Band UL-link Carrier aggregations. Detailed information in Technical Description document.					
LTE Release information			It supports only 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,UL-CA.					

4.5 5G NR SUB 6 Information

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

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High	
NR FDD Band n2 (PCS)	5 MHz	1 852.5(370500)		1 880(376000)		1 907.5(381500)	
	10 MHz	1 855(371000)		1 880(376000)		1 905(381000)	
	15 MHz	1 857.5(371500)		1 880(376000)		1 902.5(380500)	
	20 MHz	1 860(372000)		1 880(376000)		1 900(380000)	
	25 MHz	1 862.5(372500)		1 880(376000)		1 897.5(379500)	
	30 MHz	1 865(373000)		1 880(376000)		1 895(379000)	
	40 MHz	1 870(374000)		1 880(376000)		1 890(378000)	
NR FDD Band n5 (Cell)	5 MHz	826.5 (165300)		836.5(167300)		846.5 (169300)	
	10 MHz			836.5(167300)			
	15 MHz			836.5(167300)			
	20 MHz			836.5(167300)			
NR FDD Band n25	5 MHz	1 852.5(370500)		1 882.5(376500)		1 912.5(382500)	
	10 MHz	1 855(371000)		1 882.5(376500)		1 910(382000)	
	15 MHz	1 857.5(371500)		1 882.5(376500)		1 907.5(381500)	
	20 MHz	1 860(372000)		1 882.5(376500)		1 905(381000)	
	25 MHz	1 862.5(372500)		1 882.5(376500)		1 902.5(380500)	
	30 MHz	1 865(373000)		1 882.5(376500)		1 900(380000)	
	40 MHz			1 882.5(376500)			
NR FDD Band n30	5 MHz			2 310 (462000)			
	10 MHz			2 310 (462000)			
NR TDD Band n48	10 MHz	3 555(637000)		3 602.01(640134)	3 648(643200)	3 695.01(646334)	
	15 MHz	3 557.49(637166)		3 602.49(640166)	3 647.49(643166)	3 692.49(646166)	
	20 MHz	3 560.01(637334)		3 603.33(640222)	3 646.65(643110)	3 690(646000)	
	30 MHz	3 565.02 (637668)		3 605.01(640334)	3 645(643000)	3 684.99(645666)	
	40 MHz	3 570(638000)		3 624.99(641666)		3 679.98(645332)	
NR TDD Band n41	10 MHz	2 501.01(500202)	2 547(509400)	2 592.99(518598)	2 639.01(527802)	2 685(537000)	
	15 MHz	2 503.5(500700)	2 548.26(509652)	2 592.99(518598)	2 637.75(527550)	2 682.51(536502)	
	20 MHz	2 506.02(501204)	2 549.49(509898)	2 592.99(518598)	2 636.49(527298)	2 679.99(535998)	
	25 MHz	2 508.51(501702)	2 550.75(510150)	2 592.99(518598)	2 635.23(527046)	2 677.50(535500)	
	30 MHz	2 511(502200)	2 552.01(510402)	2 592.99(518598)	2 634(526800)	2 674.98(534996)	
	40 MHz	2 516.01(503202)	2 567.34(513468)		2 618.67(523734)	2 670(534000)	
	50 MHz	2 521.02(504204)		2 592.99(518598)		2 664.99(532998)	
	60 MHz	2 526(505200)		2 592.99(518598)		2 659.98(531996)	
	70 MHz	2 531.01(506202)				2 655(531000)	
	80 MHz	2 536.02(507204)				2 649.99(529998)	
	90 MHz	2 541(508200)				2 644.98(528996)	
	100 MHz			2 592.99(518598)			

Ch. No.& Freq.(MHz)		Low / Low-Mid		Mid		Mid-High / High	
NR FDD Band n66	5 MHz	1 712.5(342500)		1 745(349000)		1 777.5(355500)	
	10 MHz	1 715(343000)		1 745(349000)		1 775(355000)	
	15 MHz	1 717.5(343500)		1 745(349000)		1 772.5(354500)	
	20 MHz	1 720(344000)		1 745(349000)		1 770(354000)	
	25 MHz	1 722.5(344500)		1 745(349000)		1 767.5(353500)	
	30 MHz			1 745(349000)			
	40 MHz	1 730(346000)		1 745(349000)		1 760(352000)	
NR FDD Band n70	5 MHz	1 697.5(339500)				1 707.5(341500)	
	10 MHz	1 700(340000)		1 702.5(340500)		1 705 (341000)	
	15 MHz			1 702.5(340500)			
NR FDD Band n71	5 MHz	665.5(133100)		680.5(136100)		695.5(139100)	
	10 MHz	668(133600)		680.5(136100)		693(138600)	
	15 MHz			680.5(136100)			
	20 MHz			680.5(136100)			
NR TDD Band n77	10 MHz	3 705(647000)	3 759(650600)	3 813(654200)	3 867(657800)	3 921(661400)	3 975(665000)
	15 MHz	3 707.52(647168)	3 760.5(650700)	3 813.51(654234)	3 866.49(657766)	3 919.5(661300)	3 972.48(664832)
	20 MHz	3 710.01 (647334)	3 762 (650800)	3 813.99(654266)	3 866.01 (657734)	3 918 (661200)	3 969.99 (664666)
	25 MHz	3 712.5(647500)	3 763.5(650900)	3 814.5(654300)	3 865.5(657700)	3 916.5(661100)	3 967.5(664500)
	30 MHz	3 715.02 (647668)	3 765 (651000)	3 815.01(654334)	3 864.99 (657666)	3 915 (661000)	3 964.98 (664332)
	40 MHz	3 720 (648000)	3 768 (651200)	3 816 (654400)	3 864 (657600)	3 912 (660800)	3 960 (664000)
	50 MHz	3 725.01 (648334)	3 782.49 (652166)	3 840 (656000)		3 897.51 (659834)	3 954.99 (663666)
	60 MHz	3 730.02 (648668)	3 803.34(653556)			3 876.66(658444)	3 949.98 (663332)
	70 MHz	3 735 (649000)	3 804.99 (654336)			3 875.01 (658334)	3 945(663000)
	80 MHz	3 740.01 (649334)		3 840 (656000)			3 939.99 (662666)
	90 MHz	3 745.02 (649668)		3 840 (656000)		3 934.98 (662332)	
	100 MHz	3 750 (650000)		3 840 (656000)		3 930 (662000)	
NR TDD Band n77 (DoD)	10 MHz	3 455.01(630334)		3 500.01(633334)		3 544.98(636332)	
	15 MHz	3 457.5(630500)		3 500.01(633334)		3 542.49(636166)	
	20 MHz	3 460.02 (630668)		3 500.01 (633334)		3 540 (636000)	
	25 MHz	3 462.99(630866)		3 500.01(633334)		3 537(635800)	
	30 MHz	3 465 (631000)		3 500.01 (633334)		3 534.99 (635666)	
	40 MHz	3 470.01 (631334)				3 529.98 (635332)	
	50 MHz	3 475.02 (631668)				3 525 (635000)	
	60 MHz			3 500.01 (633334)			
	70 MHz			3 500.01 (633334)			
	80 MHz			3 500.01 (633334)			
	90 MHz			3 500.01 (633334)			
	100 MHz			3 500.01 (633334)			
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)			

Ch. No.& Freq. (MHz)		Low / Low-Mid	Mid	Mid-High / High
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 n2/n5/n25/n30/n66/n70/n71 SCS			15 kHz	
NR TDD Band n41/n48/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, except n30,n70,n78 are supported to NSA and SA Connectivity. n30,n70,n78 is only supported to SA connectivity More detailed specifications of the 5G NR bands are contained in the Technical description document.				
EN-DC Carrier Aggregation Possible Combinations			The technical description includes all the possible carrier aggregation combinations	
LTE Anchor Bands for NR Band n2 (PCS)			LTE Band 5/12/13/14/30/48/66	
LTE Anchor Bands for NR Band n5 (Cell)			LTE Band 2/30/48/66	
LTE Anchor Bands for NR Band n25			LTE Band 12/66	
LTE Anchor Bands for NR Band n30			N/A	
LTE Anchor Bands for NR Band n41			LTE Band 2/5/12/66/71	
LTE Anchor Bands for NR Band n48			LTE Band 2/66	
LTE Anchor Bands for NR Band n66 (AWS)			LTE Band 2/5/12/13/14/30/48/71	
LTE Anchor Bands for NR Band n70			N/A	
LTE Anchor Bands for NR Band n71			LTE Band 2/48/66	
LTE Anchor Bands for NR Band n77			LTE Band 2/5/12/13/14/30/66/71	
LTE Anchor Bands for NR Band n78			N/A	

4.6 DUT Antenna Locations

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

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

Head and Bluetooth Tethering SAR were evaluated for BT BR tethering applications.

Antenna	Mode/Band	Rear	Front	Left	Right	Top	Bottom
MAIN1 [Ant A]	GSM/GPRS/EDGE 850	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	GSM/GPRS/EDGE 1900	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	UMTS Band 5	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	UMTS Band 4	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	UMTS Band 2	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 2 (PCS)	Yes	Yes	Yes	Yes	No	Yes
SUB2 [Ant F]	LTE FDD Band 2	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	LTE FDD Band 4 (AWS)	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 7	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 12	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 13	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 14	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 25 (PCS)	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 26 (Cell)	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE FDD Band 30	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE TDD Band 38	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	LTE TDD Band 41 (PC3)	Yes	Yes	Yes	Yes	No	Yes
SUB3 [Ant G]	LTE Band 48	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	Yes	No	Yes
SUB2 [Ant F]	LTE FDD Band 66 (AWS)	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	LTE FDD Band 71	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	NR FDD Band 2	Yes	Yes	Yes	Yes	No	Yes
SUB2 [Ant F]	NR FDD Band 2	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	NR FDD Band 5	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	NR FDD Band n25 (PCS)	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	NR FDD Band 30	Yes	Yes	Yes	Yes	No	Yes
MAIN1 [Ant A]	NR TDD Band n41 (PC2)	Yes	Yes	Yes	Yes	No	Yes
SUB3 [Ant G]	NR TDD Band n48	Yes	Yes	Yes	No	Yes	No
Sub5 [Ant I]	NR TDD Band n48	Yes	Yes	No	No	Yes	No
SUB2 [Ant F]	NR TDD Band n48	Yes	Yes	Yes	No	Yes	No
SUB4 [Ant H]	NR TDD Band n48	Yes	Yes	No	Yes	Yes	No
MAIN1 [Ant A]	NR FDD Band 66	Yes	Yes	Yes	Yes	No	Yes
SUB2 [Ant F]	NR FDD Band 66	Yes	Yes	Yes	No	Yes	No
MAIN1 [Ant A]	NR FDD Band 70	Yes	Yes	Yes	Yes	No	Yes

Antenna	Mode/Band	Rear	Front	Left	Right	Top	Bottom
MAIN1 [Ant A]	NR FDD Band n71	Yes	Yes	Yes	Yes	No	Yes
SUB3 [Ant G]	NR TDD Band n78 (PC2)	Yes	Yes	Yes	No	Yes	No
Sub5 [Ant I]	NR TDD Band n78 (PC2)	Yes	Yes	No	No	Yes	No
SUB2 [Ant F]	NR TDD Band n78 (PC2)	Yes	Yes	Yes	No	Yes	No
Sub4 [Ant H]	NR TDD Band n78 (PC2)	Yes	Yes	No	Yes	Yes	No
SUB3 [Ant G]	NR TDD Band n77 (PC2)	Yes	Yes	Yes	No	Yes	No
Sub5 [Ant I]	NR TDD Band n77 (PC2)	Yes	Yes	No	No	Yes	No
SUB2 [Ant F]	NR TDD Band n77 (PC2)	Yes	Yes	Yes	No	Yes	No
Sub4 [Ant H]	NR TDD Band n77 (PC2)	Yes	Yes	No	Yes	Yes	No
SUB2 [Ant F]	2.4 GHz WLAN	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	5 GHz WLAN	Yes	Yes	Yes	No	Yes	No
SUB2 [Ant F]	Bluetooth	Yes	Yes	Yes	No	Yes	No
NFC Ant	NFC	Yes	Yes	Yes	No	Yes	No

Particular EUT edges were not required to be evaluated for Bluetooth Tethering and Hotspot SAR if the edges were > 25 mm from the transmitting antenna according to FCC KDB 941225 D06v02r01 on page 2.

The distance between the transmit antennas and the edges of the device are included in the filing.

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

4.7 Near Field Communications (NFC) Antenna

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

4.8 SAR Summation Scenario

According to FCC KDB 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown below paths and are mode in same rectangle to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB 447498 D01v06.

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

Note:

1. UMTS +WLAN scenario also represents the UMTS Voice/DATA + WLAN hotspot scenario.
2. VoIP is supported in GPRS/EDGE
3. The highest reported SAR for each exposure condition is used for SAR summation purpose.
4. Wi-Fi Hotspot is supported for 2.4 GHz/UNII-3 of 5 GHz WLAN.
5. Pre-installed VOIP applications are considered
6. Per the manufacturer, WIFI Direct is not expected to be used in conjunction with a held to ear or Body worn accessory voice call. Therefore, there are no simultaneous transmission scenarios involving WIFI Direct beyond that listed in the above table.
7. This device supports VoLTE/ VoWiFi.
8. LTE + 5G NR FR1 Scenarios are supported NSA and SA Connectivity.
9. NFC was evaluated for phablet based on expected usage conditions.

4.9 SAR Test Considerations

4.9.1 WiFi

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

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

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A & U-NII-2C, U-NII-4 WLAN, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

4.9.2 Licensed Transmitter(s)

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

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

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

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

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

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

LTE capabilities with overlapping transmission frequency ranges were applied to LTE Band 5 (824.7 MHz ~ 848.3 MHz) is covered by LTE Band 26 (814.7 MHz ~ 848.3 MHz), LTE Band 4 (1 712.4 MHz ~ 1 752.6 MHz) is covered by LTE Band 66 (1 712.5 MHz ~ 1 777.5 MHz), LTE Band 2 (1 850.7 MHz ~ 1 909.3 MHz) is covered by LTE Band 25 (1 850.7 MHz ~ 1 914.3 MHz), LTE Band 38 (2 572.5 MHz ~ 2 617.5 MHz) is covered by LTE Band 41 (2 498.5 MHz ~ 2 687.5 MHz) of this model each both LTE bands have the same target powers.

NR capabilities with overlapping transmission frequency ranges were applied to n2 (1 852.5 MHz ~ 1 907.5 MHz) is covered by n25 (1 852.5 MHz ~ 1 912.5 MHz), n78 (3 705 MHz ~ 3 795 MHz) is covered by n77 (3 705 MHz ~ 3 975 MHz), n78 DoD (3 455.01 MHz ~ 3 544.98 MHz) is covered by n77 DoD (3 445.01 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 product supported Intra-band LTE Carrier Aggregation for 48C with two component carriers in the uplink. SAR Measurement and conducted Powers were measured according to Nov 2019 TCBC Workshop guide.

Per FCC Guidance, C-Band for NR n77 (3705 –3975 MHz) was fully tested according to FCC procedures.

For each exposure condition and antenna, the worst-case position was additionally evaluated for the NR n77 DoD (3455.01 –3544.98 MHz).

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

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

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

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

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

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

5. Introduction

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

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

SAR Definition

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

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

Figure 1. SAR Mathematical Equation

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

Where:

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

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

6. Description of test equipment

6.1 SAR MEASUREMENT SETUP

These measurements are performed using the 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.

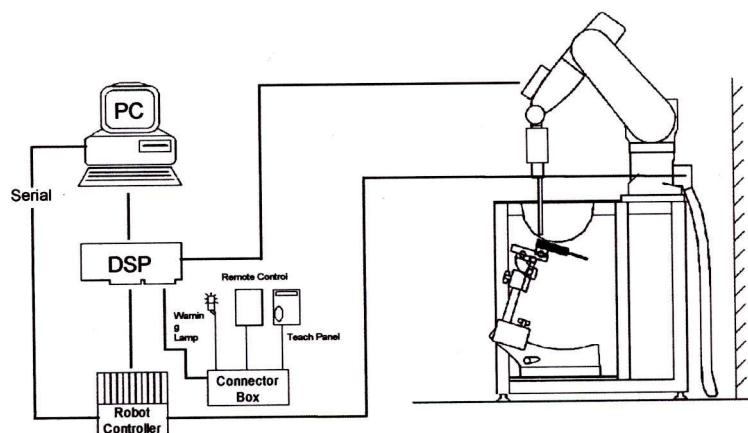


Figure 2. HCT SAR Lab. Test Measurement Set-up

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 KDB447498 is $\leq 1.4 \text{ W/kg}$, $\leq 8 \text{ mm}$, $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

8. Description of Test Position

8.1 EAR REFERENCE POINT

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

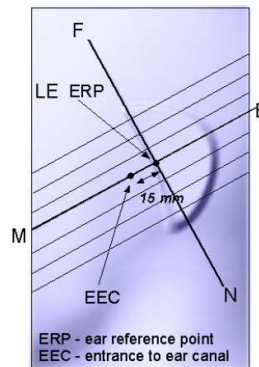


Figure 8-1
Close-up side view of ERP

8.2 Handset Reference Points

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



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

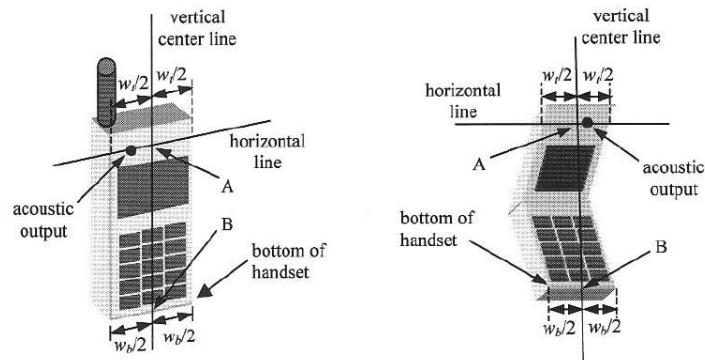


Figure 8-3. Handset vertical and horizontal reference lines

8.3 Device Holder

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

8.4 Position for Touch

Figure 8.4. shows Touch or touch position. The reference points for the right ear (RE), left ear (LE), and mouth (M), which establish the Reference Plane for handset positioning, are indicated.

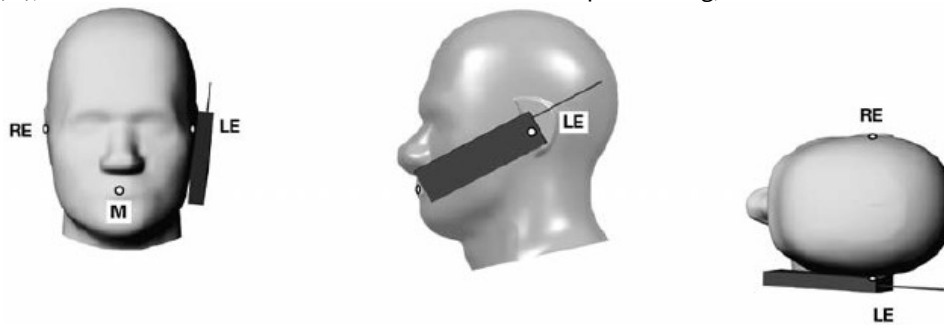


Figure 8.4 Touch/ Touch position of the wireless device

8.5 Definition of the “tilted” position

Figure 8.5. shows tilted position. Place the device in the Touch position. Then while maintaining the orientation of the device, retract the device parallel to the reference plane far enough away from the phantom to enable a rotation of the device by 15°.

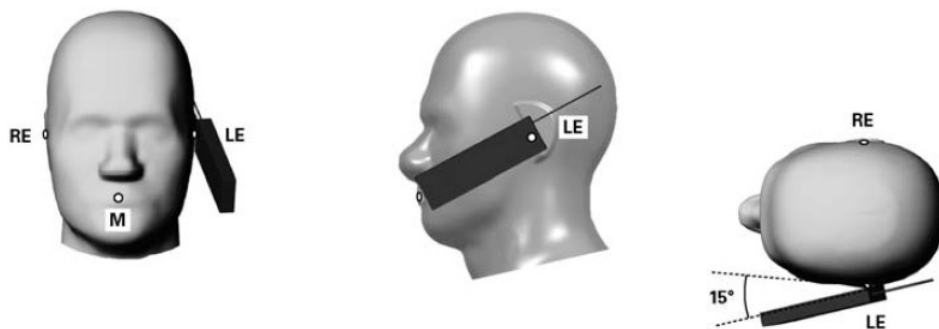


Figure 8.5. Tilt 15° position of the wireless device

8.6 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-dips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 8.6). Per FCC KDB Publication 648474 D04v01r03 Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in Body-worn accessories. The Body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for Body-worn accessory SAR compliance, without a headset connected to it. When the reported SAR for a body- worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency Band should be repeated for that body- worn accessory with a headset attached to the handset.

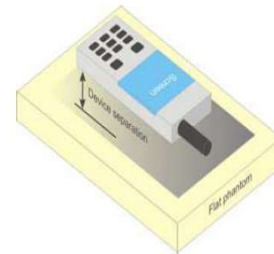


Figure 8.6
Sample Body-Worn Diagram

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

8.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets ($L \times W \geq 9\text{cm} \times 5\text{ cm}$) are based on a composite test separation distance of 5 mm from the front back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-worn accessory SAR tests.

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

When the user enables the personal wireless router functions for the handset actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The Portable Hotspot feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

8.8 Extremity Exposure Configurations

Devices that are designed or intended for use on extremities or mainly operated in extremity only exposure conditions: i.e., hands, wrists, feet and ankles, may require extremity SAR evaluation. When the device also operates in close proximity to the user's body, SAR compliance for the body is also required. The 1-g body and 10-g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

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

8.9 Bluetooth tethering Configurations

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

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

Head and Bluetooth tethering SAR were evaluated for BT BDR tethering applications.

9. RF Exposure Limits

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

NOTES:

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

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

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

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

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

10. FCC SAR General Measurement Procedures

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

10.1 Measured and Reported SAR

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

10.2 3G SAR Test Reduction Procedure

10.2.1 GSM, GPRS and EDGE

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

10.2.2 SAR Test Reduction

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

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

10.2.3 Procedures Used to Establish RF Signal for SAR

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

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR

measurement Software calculates a reference point at the start and end of the test to Touch for power drifts. If conducted Power deviations of more than 5 % occurred, the tests were repeated.

10.3 SAR Measurement Conditions for UMTS

10.3.1 Output Power Verification

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

10.3.2 Body SAR measurements

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

10.3.3 SAR Measurements with Rel. 5 HSDPA

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

10.3.4 SAR Measurements with Rel. 6 HSUPA

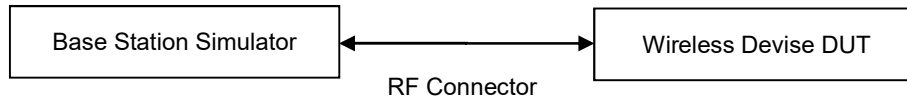
The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control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

10.3.5 DC-HSDPA

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

DC-HSDPA Configurations

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



10.4 SAR Measurement Conditions for LTE

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

10.4.1 Spectrum Plots for RB Configurations

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

10.4.2 MPR

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

10.4.3 A-MPR

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

10.4.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

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

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

10.4.5 Downlink Carrier Aggregation

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

10.4.7 LTE(TDD) Considerations

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

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

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

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

Calculated Duty Cycle – Extended cyclic prefix in uplink $\times (T_s) \times \text{no of S} + \text{no of U}$

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

10.4.8 The Call Box Setup for LTE(TDD)

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

2018/01/08 11:00		Idle(Regist)		Phone-2	Phone-1
<Fundamental Measurement> Output Main		Continuous		W-CDMA	LTE
Parameter	Fundamental	UE Report			
Reference Signal not found		UE Power : -21.5 dBm			
Power Measurement		(Meas. Count : 11/ 20)			
	Avg.	Max.	Min.	Limit	
TX Power	*****	*****	*****	dBm	20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm	
Modulation Analysis		View		(Meas. Count : 1/ 1)	
Common Parameter					
Test Parameter		TX1 - Max. Power(QPSK/1 RB)			
Call Processing		On		Scenario Normal	
Frequency					
Frame Structure		TDD			
Channel Bandwidth		FDD Hz			
UL Channel & Frequency		TDD 20 CH = 2593.000000 MHz			
DL Channel & Frequency		40620 CH = 2593.000000 MHz			
Operation Band		41			
Frequency Separation		(0)MHz			
Level					
Input Level		30.0 dBm			

2018/01/08 11:01		Idle(Regist)		Phone-2	Phone-1
<Fundamental Measurement> Output Main		Continuous		W-CDMA	LTE
Parameter	Fundamental	UE Report			
Reference Signal not found		UE Power : -21.5 dBm			
Power Measurement		(Meas. Count : 11/ 20)			
	Avg.	Max.	Min.	Limit	
TX Power	*****	*****	*****	dBm	20.3 to 25.7 dBm
Channel Power	*****	*****	*****	dBm	
Modulation Analysis		View		(Meas. Count : 1/ 1)	
MCS Index (-)		5	(QPSK)	(5)	(2216)
MCS Index (5)		5	(QPSK)	(5)	(1864)
MCS Index (0)		5	(QPSK)	(5)	(2216)
MCS Index (1,6)		N/A	(-----)	(--)	(-----)
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			

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

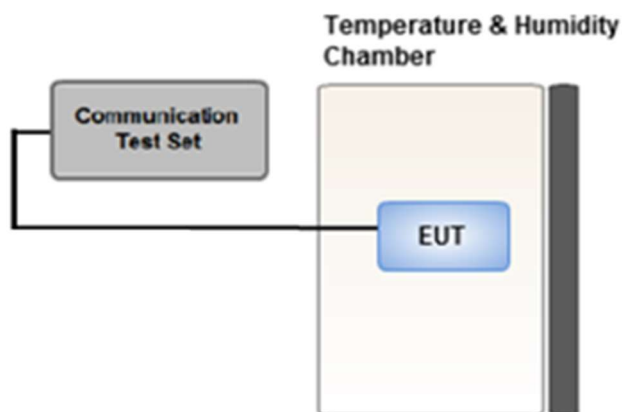
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base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



11.1.1 GSM 850 Maximum Conducted Output Power

GSM 850 – Antenna A

Measured P_{max} ,

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		33.50	33.50	32.50	30.50	28.50	28.00	26.00	24.00	23.00
Nominal		32.50	32.50	31.50	29.50	27.50	27.00	25.00	23.00	22.00
GSM 850	128	32.35	32.27	30.75	28.96	27.64	26.89	24.65	23.28	22.01
	190	32.31	32.51	30.67	28.71	27.71	26.82	24.75	23.18	22.08
	251	32.30	33.03	31.11	29.35	28.05	27.15	24.78	23.41	22.22

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	26.48	26.24	25.49	18.97	19.98	19.74	19.99
Nominal		23.47	23.47	25.48	25.24	24.49	17.97	18.98	18.74	18.99
GSM 850	128	23.32	23.24	24.73	24.70	24.63	17.86	18.63	19.02	19.00
	190	23.28	23.48	24.65	24.45	24.70	17.79	18.73	18.92	19.07
	251	23.27	24.00	25.09	25.09	25.04	18.12	18.76	19.15	19.21

GSM Conducted output powers (Frame-Average)

Measured FREE(RSI=0), RCV(RSI=1)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		33.00	33.00	30.00	28.20	27.00	28.00	26.00	24.00	23.00
Nominal		32.00	32.00	29.00	27.20	26.00	27.00	25.00	23.00	22.00
GSM 850	128	31.42	31.53	29.08	26.69	25.52	26.89	24.65	23.28	22.01
	190	31.45	31.62	29.12	26.62	25.43	26.82	24.75	23.18	22.08
	251	31.46	32.31	29.38	27.04	25.63	27.15	24.78	23.41	22.22

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		23.97	23.97	23.98	23.94	23.99	18.97	19.98	19.74	19.99
Nominal		22.97	22.97	22.98	22.94	22.99	17.97	18.98	18.74	18.99
GSM 850	128	22.39	22.50	23.06	22.43	22.51	17.86	18.63	19.02	19.00
	190	22.42	22.59	23.10	22.36	22.42	17.79	18.73	18.92	19.07
	251	22.43	23.28	23.36	22.78	22.62	18.12	18.76	19.15	19.21

GSM Conducted output powers (Frame-Average)

11.1.2 GSM 1900 Maximum Conducted Output Power

GSM1900 – Antenna A

Measured P_{max}

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		30.50	30.50	29.00	27.50	25.50	27.00	25.00	23.00	22.00
Nominal		29.50	29.50	28.00	26.50	24.50	26.00	24.00	22.00	21.00
GSM 1900	512	29.69	29.48	27.15	25.86	25.16	25.78	23.82	22.71	21.45
	661	29.70	29.67	27.38	26.02	25.17	25.87	23.95	22.78	21.61
	810	29.70	29.67	27.38	26.02	25.17	25.87	23.95	22.78	21.61

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	22.98	23.24	22.49	17.97	18.98	18.74	18.99
Nominal		20.47	20.47	21.98	22.24	21.49	16.97	17.98	17.74	17.99
GSM 1900	512	20.66	20.45	21.13	21.60	22.15	16.75	17.80	18.45	18.44
	661	20.67	20.64	21.36	21.76	22.16	16.84	17.93	18.52	18.60
	810	20.66	20.88	21.42	21.77	22.25	16.76	18.26	18.60	18.57

GSM Conducted output powers (Frame-Average)

Measured FREE(RSI=0), RCV(RSI=1)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		29.50	29.50	26.50	24.70	23.50	27.00	25.00	23.00	22.00
Nominal		28.50	28.50	25.50	23.70	22.50	26.00	24.00	22.00	21.00
GSM 1900	512	27.82	28.15	25.12	23.96	22.89	25.78	23.82	22.71	21.45
	661	27.83	28.09	25.35	23.66	22.84	25.87	23.95	22.78	21.61
	810	27.84	28.34	25.39	23.45	22.40	25.79	24.28	22.86	21.58

GSM Conducted output powers (Burst-Average)

Mode / Band		Voice	GPRS(GMSK) Data – CS1(dBm)				EDGE Data (dBm)			
		GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot	EDGE 1 TX Slot	EDGE 2 TX Slot	EDGE 3 TX Slot	EDGE 4 TX Slot
Maximum		20.47	20.47	20.48	20.44	20.49	17.97	18.98	18.74	18.99
Nominal		19.47	19.47	19.48	19.44	19.49	16.97	17.98	17.74	17.99
GSM 1900	512	18.79	19.12	19.10	19.70	19.88	16.75	17.80	18.45	18.44
	661	18.80	19.06	19.33	19.40	19.83	16.84	17.93	18.52	18.60
	810	18.81	19.31	19.37	19.19	19.39	16.76	18.26	18.60	18.57

GSM Conducted output powers (Frame-Average)

Note:

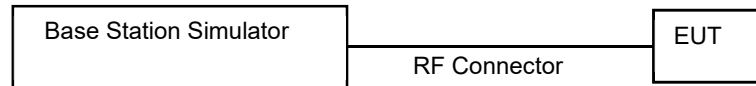
Time slot average factor is as follows:

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

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

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

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



11.2 UMTS Maximum Output Power

HSPA+

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

11.2.1 UMTS Band 5 Maximum Conducted Output Power

UMTS Band 5 Maximum Conducted Output Power – Antenna A

Measured P_{max}

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	24.25	24.25	24.27	-
99		12.2 kbps AMR	24.24	24.21	24.25	-
5	HSDPA	Subtest 1	22.97	23.01	23.05	0
5		Subtest 2	22.41	22.41	22.52	0
5		Subtest 3	21.81	21.87	21.93	0.5
5		Subtest 4	21.40	21.42	21.49	0.5
6	HSUPA	Subtest 1	21.61	21.76	21.59	0
6		Subtest 2	19.59	19.72	19.63	2
6		Subtest 3	22.66	22.77	22.61	1
6		Subtest 4	21.97	21.89	21.93	2
6		Subtest 5	23.61	23.70	23.63	0
8	DC-HSDPA	Subtest1	23.02	23.42	23.18	0
8		Subtest2	22.87	22.91	22.89	0
8		Subtest3	21.65	21.73	21.66	0.5
8		Subtest4	21.77	21.82	21.69	0.5

UMTS Average Conducted output powers

Measured FREE(RSI=0), RCV(RSI=1)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 5 [dBm]			3GPP MPR
		Subtest	UL4132 DL4357	UL4183 DL4408	UL4233 DL4458	
99	UMTS	12.2 kbps RMC	23.18	23.15	23.25	-
99		12.2 kbps AMR	23.17	23.16	23.23	-
5	HSDPA	Subtest 1	22.08	22.09	22.17	0
5		Subtest 2	23.15	23.13	23.24	0
5		Subtest 3	22.12	22.11	22.18	0
5		Subtest 4	21.59	21.58	21.69	0
6	HSUPA	Subtest 1	20.68	20.71	20.66	0
6		Subtest 2	19.59	19.66	19.62	0
6		Subtest 3	20.61	20.70	20.63	0
6		Subtest 4	19.51	19.67	19.59	0
6		Subtest 5	21.68	21.71	21.67	0
8	DC-HSDPA	Subtest1	22.59	22.59	22.24	0
8		Subtest2	22.76	22.82	22.80	0
8		Subtest3	21.53	21.62	21.55	0
8		Subtest4	21.83	21.91	21.81	0

UMTS Average Conducted output powers

11.2.2 UMTS Band 4 Maximum Conducted Output Power

UMTS Band 4 Maximum Conducted Output Power – Antenna A

Measured P_{max}

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	23.41	23.59	23.44	-
99		12.2 kbps AMR	23.37	23.52	23.34	-
5	HSDPA	Subtest 1	23.60	23.55	23.53	0
5		Subtest 2	23.11	23.23	23.21	0
5		Subtest 3	22.47	22.53	22.51	0.5
5		Subtest 4	22.53	22.69	22.56	0.5
6	HSUPA	Subtest 1	22.31	22.34	22.29	0
6		Subtest 2	20.76	20.83	20.77	2
6		Subtest 3	22.17	22.29	22.21	1
6		Subtest 4	20.17	20.27	20.10	2
6		Subtest 5	23.14	23.33	23.09	0
8	DC-HSDPA	Subtest1	23.37	23.56	23.44	0
8		Subtest2	23.17	23.27	23.10	0
8		Subtest3	23.18	22.20	22.11	0.5
8		Subtest4	22.47	22.56	22.43	0.5

UMTS Average Conducted output powers

Measured FREE(RSI = 0), RCV(RSI=1)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 4 [dBm]			3GPP MPR
		Subtest	UL 1312 DL 1537	UL 1412 DL 1637	UL 1513 DL 1738	
99	UMTS	12.2 kbps RMC	18.66	18.71	18.54	-
99		12.2 kbps AMR	18.61	18.68	18.55	-
5	HSDPA	Subtest 1	17.80	17.83	17.80	0
5		Subtest 2	18.23	18.26	18.22	0
5		Subtest 3	18.81	18.83	18.78	0
5		Subtest 4	18.72	18.80	18.74	0
6	HSUPA	Subtest 1	16.64	16.71	16.65	0
6		Subtest 2	16.55	16.51	16.61	0
6		Subtest 3	17.69	17.73	17.70	0
6		Subtest 4	16.58	16.61	16.58	0
6		Subtest 5	17.68	17.71	17.71	0
8	DC-HSDPA	Subtest1	17.85	17.87	17.81	0
8		Subtest2	18.37	18.43	18.43	0
8		Subtest3	18.37	18.37	18.34	0
8		Subtest4	18.67	18.75	18.73	0

UMTS Average Conducted output powers

11.2.3 UMTS Band 2 Maximum Conducted Output Power

UMTS Band 2 Maximum Conducted Output Power – Antenna A

Measured P_{max}

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	23.60	23.62	23.54	-
99		12.2 kbps AMR	23.52	23.53	23.49	-
5	HSDPA	Subtest 1	23.51	23.47	23.39	0
5		Subtest 2	23.29	23.33	23.31	0
5		Subtest 3	22.55	22.64	22.47	0.5
5		Subtest 4	22.24	22.25	22.21	0.5
6	HSUPA	Subtest 1	22.46	22.51	22.49	0
6		Subtest 2	19.98	20.07	20.01	2
6		Subtest 3	22.31	22.43	22.29	1
6		Subtest 4	20.27	20.39	20.13	2
6		Subtest 5	23.31	23.43	23.16	0
8	DC-HSDPA	Subtest 1	23.19	23.17	23.08	0
8		Subtest2	22.92	23.01	22.93	0
8		Subtest3	21.90	21.93	21.76	0.5
8		Subtest4	21.71	21.92	21.88	0.5

UMTS Average Conducted output powers

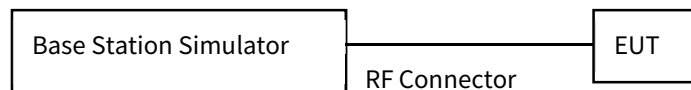
Measured FREE(RSI = 0), RCV(RSI=1)

3GPP Release Version	Mode	3GPP 34.121	UMTS Band 2 [dBm]			3GPP MPR
		Subtest	UL9262 DL9662	UL9400 DL9800	UL9538 DL9938	
99	UMTS	12.2 kbps RMC	18.73	18.91	18.81	-
99		12.2 kbps AMR	18.71	18.89	18.79	-
5	HSDPA	Subtest 1	17.91	17.79	17.70	0
5		Subtest 2	18.27	18.35	18.30	0
5		Subtest 3	18.83	18.86	18.78	0
5		Subtest 4	18.39	18.45	18.38	0
6	HSUPA	Subtest 1	16.90	16.95	16.93	0
6		Subtest 2	16.52	16.53	16.54	0
6		Subtest 3	17.76	17.81	17.76	0
6		Subtest 4	16.89	16.92	16.90	0
6		Subtest 5	17.64	17.71	17.67	0
8	DC-HSDPA	Subtest 1	17.66	17.70	17.69	0
8		Subtest2	18.10	18.17	18.11	0
8		Subtest3	18.34	18.36	18.33	0
8		Subtest4	18.20	18.21	18.18	0

UMTS Average Conducted output powers

HSDPA Configurations

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



11.3 LTE Maximum Output Power

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

LTE B5/B12/B13/B14/B26/B30/B71 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 Band 2 Conducted Power_ Measured Pmax_Ant.A

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.98	24.02	23.93	0	0
		1	49	24.02	23.99	23.92	0	0
		1	99	24.00	23.96	23.87	0	0
		50	0	23.14	23.10	23.06	0 - 1	1
		50	25	23.14	23.10	23.05	0 - 1	1
		50	49	23.13	23.07	23.07	0 - 1	1
		100	0	23.09	23.03	23.04	0 - 1	1
	16QAM	1	0	23.49	23.45	23.22	0 - 1	1
		1	49	23.21	23.24	23.21	0 - 1	1
		1	99	23.38	23.30	23.16	0 - 1	1
		50	0	22.16	22.12	22.08	0 - 2	2
		50	25	22.17	22.06	22.06	0 - 2	2
		50	49	22.14	22.08	22.02	0 - 2	2
		100	0	22.08	22.03	22.03	0 - 2	2
	64QAM	1	0	22.24	22.26	22.16	0 - 2	2
		1	49	22.34	22.25	22.26	0 - 2	2
		1	99	22.37	22.18	22.20	0 - 2	2
		50	0	21.17	21.11	21.08	0 - 3	3
		50	25	21.10	21.06	21.01	0 - 3	3
		50	49	21.15	21.06	21.04	0 - 3	3
		100	0	21.08	20.99	21.00	0 - 3	3
	256QAM	1	0	19.21	19.24	19.18	0 - 5	5
		1	49	19.21	19.13	19.10	0 - 5	5
		1	99	19.17	19.10	19.10	0 - 5	5
		50	0	19.10	19.02	18.99	0 - 5	5
		50	25	19.10	19.00	18.99	0 - 5	5
		50	49	19.02	18.97	18.98	0 - 5	5
		100	0	19.08	19.00	18.97	0 - 5	5

LTE Band 2 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	18.12	18.06	18.04	0	0
		1	49	18.02	18.04	17.94	0	0
		1	99	18.08	18.01	17.94	0	0
		50	0	17.92	17.82	17.80	0 - 1	0
		50	25	18.00	17.88	17.78	0 - 1	0
		50	49	17.88	17.82	17.80	0 - 1	0
		100	0	17.84	17.83	17.82	0 - 1	0
	16QAM	1	0	18.24	18.21	18.03	0 - 1	0
		1	49	18.09	17.97	17.98	0 - 1	0
		1	99	18.19	18.08	18.09	0 - 1	0
		50	0	17.91	17.90	17.83	0 - 2	0
		50	25	17.97	17.89	17.79	0 - 2	0
		50	49	17.92	17.88	17.86	0 - 2	0
		100	0	17.85	17.78	17.76	0 - 2	0
	64QAM	1	0	18.05	17.97	17.96	0 - 2	0
		1	49	18.08	18.03	18.04	0 - 2	0
		1	99	18.16	18.00	17.97	0 - 2	0
		50	0	17.95	17.89	17.91	0 - 3	0
		50	25	17.97	17.82	17.81	0 - 3	0
		50	49	17.97	17.83	17.83	0 - 3	0
		100	0	17.88	17.80	17.78	0 - 3	0
	256QAM	1	0	18.04	18.02	17.94	0 - 5	0
		1	49	18.07	17.93	17.89	0 - 5	0
		1	99	18.07	17.97	17.88	0 - 5	0
		50	0	17.89	17.84	17.85	0 - 5	0
		50	25	17.98	17.87	17.80	0 - 5	0
		50	49	17.86	17.88	17.84	0 - 5	0
		100	0	17.91	17.85	17.82	0 - 5	0

LTE Band 2 Conducted Power_ Measured RCV(RSI=1) _ Antenna.A

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	19.06	19.13	19.05	0	0
		1	49	19.17	19.20	19.25	0	0
		1	99	19.12	19.24	19.03	0	0
		50	0	19.19	19.24	19.15	0 - 1	0
		50	25	19.13	19.20	19.11	0 - 1	0
		50	49	19.24	19.21	19.03	0 - 1	0
		100	0	19.28	19.18	19.10	0 - 1	0
	16QAM	1	0	19.47	19.51	19.40	0 - 1	0
		1	49	19.35	19.48	19.41	0 - 1	0
		1	99	19.45	19.49	19.31	0 - 1	0
		50	0	19.20	19.11	19.23	0 - 2	0
		50	25	19.27	19.16	19.18	0 - 2	0
		50	49	19.26	19.27	19.20	0 - 2	0
		100	0	19.20	19.15	19.03	0 - 2	0
	64QAM	1	0	19.28	19.29	19.22	0 - 2	0
		1	49	19.09	18.88	18.94	0 - 2	0
		1	99	19.33	19.15	19.25	0 - 2	0
		50	0	19.21	19.17	19.23	0 - 3	0
		50	25	19.22	19.11	19.05	0 - 3	0
		50	49	19.22	19.17	19.13	0 - 3	0
		100	0	19.20	19.05	19.06	0 - 3	0
	256QAM	1	0	19.24	19.24	19.16	0 - 5	0
		1	49	19.15	19.22	19.06	0 - 5	0
		1	99	19.19	19.13	19.07	0 - 5	0
		50	0	19.25	19.09	19.15	0 - 5	0
		50	25	19.11	19.08	19.12	0 - 5	0
		50	49	19.21	19.20	19.17	0 - 5	0
		100	0	19.23	19.18	19.11	0 - 5	0

LTE Band 2 Conducted Power_ Measured Pmax_Antenna.F

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	23.58	23.70	23.63	0	0
		1	49	23.63	23.77	23.59	0	0
		1	99	23.66	23.65	23.61	0	0
		50	0	22.75	22.89	22.79	0 - 1	1
		50	25	22.77	22.82	22.79	0 - 1	1
		50	49	22.80	22.82	22.79	0 - 1	1
		100	0	22.77	22.84	22.75	0 - 1	1
	16QAM	1	0	22.80	22.98	22.90	0 - 1	1
		1	49	22.91	22.95	22.80	0 - 1	1
		1	99	22.97	22.93	22.93	0 - 1	1
		50	0	21.74	21.81	21.76	0 - 2	2
		50	25	21.75	21.81	21.76	0 - 2	2
		50	49	21.77	21.80	21.78	0 - 2	2
		100	0	21.74	21.78	21.71	0 - 2	2
	64QAM	1	0	21.78	21.83	21.87	0 - 2	2
		1	49	21.90	21.91	21.89	0 - 2	2
		1	99	21.92	21.90	21.86	0 - 2	2
		50	0	20.79	20.82	20.73	0 - 3	3
		50	25	20.76	20.80	20.72	0 - 3	3
		50	49	20.79	20.79	20.77	0 - 3	3
		100	0	20.75	20.79	20.69	0 - 3	3
	256QAM	1	0	18.87	18.86	18.85	0 - 5	5
		1	49	18.88	18.81	18.92	0 - 5	5
		1	99	18.83	18.93	18.93	0 - 5	5
		50	0	18.72	18.79	18.71	0 - 5	5
		50	25	18.73	18.80	18.75	0 - 5	5
		50	49	18.79	18.80	18.77	0 - 5	5
		100	0	18.73	18.80	18.74	0 - 5	5

LTE Band 2 Conducted Power_ Measured Free(RSI=0), RCV(RSI=1) _Antenna.F

LTE Band 2_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				18700 Ch. 1860 MHz	18900 Ch. 1880 MHz	19100 Ch. 1900 MHz		
20 MHz	QPSK	1	0	17.11	17.22	17.09	0	0
		1	49	17.07	17.18	17.08	0	0
		1	99	17.14	17.15	17.19	0	0
		50	0	17.11	17.21	17.12	0 - 1	0
		50	25	17.17	17.18	17.16	0 - 1	0
		50	49	17.15	17.14	17.12	0 - 1	0
		100	0	17.16	17.17	17.11	0 - 1	0
	16QAM	1	0	17.53	17.49	17.37	0 - 1	0
		1	49	17.31	17.40	17.30	0 - 1	0
		1	99	17.57	17.53	17.63	0 - 1	0
		50	0	17.14	17.19	17.15	0 - 2	0
		50	25	17.16	17.22	17.19	0 - 2	0
		50	49	17.20	17.18	17.21	0 - 2	0
		100	0	17.20	17.21	17.14	0 - 2	0
	64QAM	1	0	17.39	17.39	17.33	0 - 2	0
		1	49	17.41	17.41	17.33	0 - 2	0
		1	99	17.49	17.42	17.49	0 - 2	0
		50	0	17.20	17.21	17.15	0 - 3	0
		50	25	17.17	17.23	17.14	0 - 3	0
		50	49	17.21	17.20	17.17	0 - 3	0
		100	0	17.20	17.21	17.16	0 - 3	0
	256QAM	1	0	17.23	17.32	17.24	0 - 5	0
		1	49	17.22	17.26	17.22	0 - 5	0
		1	99	17.34	17.41	17.34	0 - 5	0
		50	0	17.16	17.23	17.16	0 - 5	0
		50	25	17.17	17.16	17.15	0 - 5	0
		50	49	17.20	17.23	17.15	0 - 5	0
		100	0	17.20	17.22	17.20	0 - 5	0

11.3.2 LTE FDD Band 4 Maximum Conducted Power

LTE Band 4 Conducted Power_ Measured Pmax_Antenna.A

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	23.80	0	0
		1	49	23.76	0	0
		1	99	23.81	0	0
		50	0	22.91	0 - 1	1
		50	25	22.94	0 - 1	1
		50	49	22.93	0 - 1	1
		100	0	22.90	0 - 1	1
	16QAM	1	0	23.17	0 - 1	1
		1	49	23.06	0 - 1	1
		1	99	23.05	0 - 1	1
		50	0	21.90	0 - 2	2
		50	25	21.92	0 - 2	2
		50	49	21.92	0 - 2	2
		100	0	21.85	0 - 2	2
	64QAM	1	0	21.98	0 - 2	2
		1	49	22.01	0 - 2	2
		1	99	22.13	0 - 2	2
		50	0	20.85	0 - 3	3
		50	25	20.90	0 - 3	3
		50	49	20.87	0 - 3	3
		100	0	20.83	0 - 3	3
	256QAM	1	0	18.92	0 - 5	5
		1	49	18.87	0 - 5	5
		1	99	19.01	0 - 5	5
		50	0	18.85	0 - 5	5
		50	25	18.84	0 - 5	5
		50	49	18.86	0 - 5	5
		100	0	18.86	0 - 5	5

LTE Band 4 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	17.22	0	0
		1	49	17.21	0	0
		1	99	17.17	0	0
		50	0	17.28	0 - 1	0
		50	25	17.26	0 - 1	0
		50	49	17.26	0 - 1	0
		100	0	17.20	0 - 1	0
	16QAM	1	0	17.55	0 - 1	0
		1	49	17.32	0 - 1	0
		1	99	17.45	0 - 1	0
		50	0	17.21	0 - 2	0
		50	25	17.24	0 - 2	0
		50	49	17.29	0 - 2	0
		100	0	17.16	0 - 2	0
	64QAM	1	0	17.31	0 - 2	0
		1	49	17.27	0 - 2	0
		1	99	17.34	0 - 2	0
		50	0	17.21	0 - 3	0
		50	25	17.28	0 - 3	0
		50	49	17.27	0 - 3	0
		100	0	17.19	0 - 3	0
	256QAM	1	0	17.18	0 - 5	0
		1	49	17.06	0 - 5	0
		1	99	17.14	0 - 5	0
		50	0	17.14	0 - 5	0
		50	25	17.12	0 - 5	0
		50	49	17.20	0 - 5	0
		100	0	17.11	0 - 5	0

LTE Band 4 Conducted Power_ Measured RCV(RSI=1) _Antenna.A

LTE Band 4_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]	MPR Allowed Per 3GPP [dB]	MPR [dB]
				20175 Ch. 1732.5 MHz		
20 MHz	QPSK	1	0	19.17	0	0
		1	49	19.34	0	0
		1	99	19.19	0	0
		50	0	19.36	0 - 1	0
		50	25	19.21	0 - 1	0
		50	49	19.31	0 - 1	0
		100	0	19.32	0 - 1	0
	16QAM	1	0	19.43	0 - 1	0
		1	49	19.59	0 - 1	0
		1	99	19.53	0 - 1	0
		50	0	19.28	0 - 2	0
		50	25	19.36	0 - 2	0
		50	49	19.36	0 - 2	0
		100	0	19.25	0 - 2	0
	64QAM	1	0	19.36	0 - 2	0
		1	49	19.06	0 - 2	0
		1	99	19.42	0 - 2	0
		50	0	19.24	0 - 3	0
		50	25	19.18	0 - 3	0
		50	49	19.23	0 - 3	0
		100	0	19.23	0 - 3	0
	256QAM	1	0	18.89	0 - 5	1
		1	49	18.76	0 - 5	1
		1	99	18.84	0 - 5	1
		50	0	18.79	0 - 5	1
		50	25	18.87	0 - 5	1
		50	49	18.84	0 - 5	1
		100	0	18.75	0 - 5	1

11.3.3 LTE FDD Band 5 Maximum Conducted Power

LTE Band 5 Conducted Power_ Measured Pmax, RCV(RSI=1) _Antenna.A

LTE Band 5_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525 Ch. 836.5 MHz		
10 MHz	QPSK	1	0		24.47	0	0
		1	24		24.45	0	0
		1	49		24.40	0	0
		25	0		23.57	0 - 1	1
		25	12		23.58	0 - 1	1
		25	24		23.57	0 - 1	1
		50	0		23.66	0 - 1	1
	16QAM	1	0		23.74	0 - 1	1
		1	24		23.54	0 - 1	1
		1	49		23.55	0 - 1	1
		25	0		22.56	0 - 2	2
		25	12		22.54	0 - 2	2
		25	24		22.52	0 - 2	2
		50	0		22.54	0 - 2	2
	64QAM	1	0		22.66	0 - 2	2
		1	24		22.54	0 - 2	2
		1	49		22.57	0 - 2	2
		25	0		21.53	0 - 3	3
		25	12		21.48	0 - 3	3
		25	24		21.44	0 - 3	3
		50	0		21.52	0 - 3	3
	256QAM	1	0		19.58	0 - 5	5
		1	24		19.53	0 - 5	5
		1	49		19.54	0 - 5	5
		25	0		19.54	0 - 5	5
		25	12		19.49	0 - 5	5
		25	24		19.44	0 - 5	5
		50	0		19.49	0 - 5	5

LTE Band 5 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 5_10 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					20525 Ch. 836.5 MHz		
10 MHz	QPSK	1	0		22.17	0	0
		1	24		22.14	0	0
		1	49		22.12	0	0
		25	0		22.25	0 - 1	0
		25	12		22.21	0 - 1	0
		25	24		22.25	0 - 1	0
		50	0		22.28	0 - 1	0
	16QAM	1	0		22.44	0 - 1	0
		1	24		22.24	0 - 1	0
		1	49		22.31	0 - 1	0
		25	0		22.27	0 - 2	0.5
		25	12		22.22	0 - 2	0.5
		25	24		22.18	0 - 2	0.5
		50	0		22.31	0 - 2	0.5
	64QAM	1	0		22.33	0 - 2	0.5
		1	24		22.32	0 - 2	0.5
		1	49		22.32	0 - 2	0.5
		25	0		21.34	0 - 3	1.5
		25	12		21.32	0 - 3	1.5
		25	24		21.32	0 - 3	1.5
		50	0		21.39	0 - 3	1.5
	256QAM	1	0		19.42	0 - 5	3.5
		1	24		19.31	0 - 5	3.5
		1	49		19.41	0 - 5	3.5
		25	0		19.35	0 - 5	3.5
		25	12		19.32	0 - 5	3.5
		25	24		19.33	0 - 5	3.5
		50	0		19.34	0 - 5	3.5

11.3.4 LTE FDD Band 7 Maximum Conducted Power

LTE Band 7 Conducted Power_ Measured Pmax ,RCV(RSI=1) _Antenna.A

LTE Band 7_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 MHz	21100 Ch. 2535 MHz	21350 Ch. 2560 MHz		
20 MHz	QPSK	1	0	23.04	22.94	22.86	0	0
		1	49	23.00	23.00	22.87	0	0
		1	99	22.98	22.93	22.80	0	0
		50	0	22.17	22.11	21.96	0 - 1	1
		50	25	22.14	22.10	21.94	0 - 1	1
		50	49	22.06	22.08	21.95	0 - 1	1
		100	0	22.11	22.06	21.94	0 - 1	1
	16QAM	1	0	22.33	22.34	22.19	0 - 1	1
		1	49	22.25	22.28	22.11	0 - 1	1
		1	99	22.28	22.31	22.18	0 - 1	1
		50	0	21.17	21.10	20.93	0 - 2	2
		50	25	21.12	21.07	20.94	0 - 2	2
		50	49	21.09	21.07	20.93	0 - 2	2
		100	0	21.07	21.03	20.90	0 - 2	2
	64QAM	1	0	21.24	21.22	21.07	0 - 2	2
		1	49	21.21	21.27	21.09	0 - 2	2
		1	99	21.25	21.20	21.01	0 - 2	2
		50	0	20.15	20.08	19.92	0 - 3	3
		50	25	20.07	20.05	19.94	0 - 3	3
		50	49	20.07	20.02	19.90	0 - 3	3
		100	0	20.02	19.98	19.82	0 - 3	3
	256QAM	1	0	18.26	18.15	18.03	0 - 5	5
		1	49	18.19	18.12	18.07	0 - 5	5
		1	99	18.13	18.13	17.98	0 - 5	5
		50	0	18.10	18.03	17.87	0 - 5	5
		50	25	18.04	18.00	17.89	0 - 5	5
		50	49	18.06	18.03	17.90	0 - 5	5
		100	0	18.09	18.03	17.92	0 - 5	5

LTE Band 7 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 7_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				20850 Ch. 2510 MHz	21100 Ch. 2535 MHz	21350 Ch. 2560 MHz		
20 MHz	QPSK	1	0	17.59	17.58	17.44	0	0
		1	49	17.45	17.55	17.42	0	0
		1	99	17.47	17.56	17.36	0	0
		50	0	17.62	17.64	17.51	0 - 1	0
		50	25	17.69	17.65	17.50	0 - 1	0
		50	49	17.58	17.68	17.48	0 - 1	0
		100	0	17.61	17.62	17.46	0 - 1	0
	16QAM	1	0	17.74	17.82	17.77	0 - 1	0
		1	49	17.73	17.81	17.62	0 - 1	0
		1	99	17.81	17.76	17.73	0 - 1	0
		50	0	17.56	17.61	17.51	0 - 2	0
		50	25	17.59	17.65	17.52	0 - 2	0
		50	49	17.60	17.62	17.49	0 - 2	0
		100	0	17.55	17.61	17.49	0 - 2	0
	64QAM	1	0	17.64	17.69	17.63	0 - 2	0
		1	49	17.69	17.66	17.62	0 - 2	0
		1	99	17.70	17.77	17.57	0 - 2	0
		50	0	17.59	17.62	17.51	0 - 3	0
		50	25	17.56	17.60	17.49	0 - 3	0
		50	49	17.56	17.64	17.45	0 - 3	0
		100	0	17.53	17.61	17.48	0 - 3	0
	256QAM	1	0	17.62	17.72	17.62	0 - 5	0
		1	49	17.68	17.72	17.64	0 - 5	0
		1	99	17.75	17.75	17.50	0 - 5	0
		50	0	17.59	17.59	17.50	0 - 5	0
		50	25	17.58	17.60	17.50	0 - 5	0
		50	49	17.59	17.66	17.47	0 - 5	0
		100	0	17.59	17.67	17.48	0 - 5	0

11.3.5 LTE FDD Band 12 Maximum Conducted Power

LTE Band 12 Conducted Power_ Measured Pmax ,Free(RSI=0) ,RCV(RSI=1) _Antenna.A

LTE Band 12_20 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		24.68		0	0
		1	24		24.58		0	0
		1	49		24.50		0	0
		25	0		23.76		0 - 1	1
		25	12		23.72		0 - 1	1
		25	24		23.69		0 - 1	1
		50	0		23.83		0 - 1	1
	16QAM	1	0		24.01		0 - 1	1
		1	24		23.79		0 - 1	1
		1	49		23.85		0 - 1	1
		25	0		22.76		0 - 2	2
		25	12		22.72		0 - 2	2
		25	24		22.72		0 - 2	2
		50	0		22.78		0 - 2	2
	64QAM	1	0		22.86		0 - 2	2
		1	24		22.83		0 - 2	2
		1	49		22.75		0 - 2	2
		25	0		21.74		0 - 3	3
		25	12		21.70		0 - 3	3
		25	24		21.66		0 - 3	3
		50	0		21.74		0 - 3	3
	256QAM	1	0		19.76		0 - 5	5
		1	24		19.66		0 - 5	5
		1	49		19.69		0 - 5	5
		25	0		19.71		0 - 5	5
		25	12		19.64		0 - 5	5
		25	24		19.63		0 - 5	5
		50	0		19.71		0 - 5	5

11.3.6 LTE FDD Band 13 Maximum Conducted Power

LTE Band 13 Conducted Power_ Measured Pmax ,Free(RSI=0) ,RCV(RSI=1) _Antenna.A

LTE Band 13_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23230 Ch. 782 MHz		
10 MHz	QPSK	1	0		23.80	0	0
		1	24		23.72	0	0
		1	49		23.67	0	0
		25	0		22.99	0 - 1	1
		25	12		22.93	0 - 1	1
		25	24		22.90	0 - 1	1
		50	0		23.00	0 - 1	1
	16QAM	1	0		23.09	0 - 1	1
		1	24		22.96	0 - 1	1
		1	49		23.02	0 - 1	1
		25	0		21.92	0 - 2	2
		25	12		21.84	0 - 2	2
		25	24		21.80	0 - 2	2
		50	0		21.89	0 - 2	2
	64QAM	1	0		21.90	0 - 2	2
		1	24		21.92	0 - 2	2
		1	49		21.85	0 - 2	2
		25	0		20.88	0 - 3	3
		25	12		20.87	0 - 3	3
		25	24		20.81	0 - 3	3
		50	0		20.85	0 - 3	3
	256QAM	1	0		18.96	0 - 5	5
		1	24		18.83	0 - 5	5
		1	49		18.83	0 - 5	5
		25	0		18.84	0 - 5	5
		25	12		18.82	0 - 5	5
		25	24		18.78	0 - 5	5
		50	0		18.86	0 - 5	5

11.3.7 LTE FDD Band 14 Maximum Conducted Power

LTE Band 14 Conducted Power_ Measured Pmax ,Free(RSI=0) ,RCV(RSI=1) _Antenna.A

LTE Band 14_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					23330 Ch. 793 MHz		
10 MHz	QPSK	1	0		24.02	0	0
		1	24		23.97	0	0
		1	49		23.87	0	0
		25	0		23.22	0 - 1	1
		25	12		23.17	0 - 1	1
		25	24		23.14	0 - 1	1
		50	0		23.23	0 - 1	1
	16QAM	1	0		23.29	0 - 1	1
		1	24		23.13	0 - 1	1
		1	49		23.16	0 - 1	1
		25	0		22.11	0 - 2	2
		25	12		22.12	0 - 2	2
		25	24		22.08	0 - 2	2
		50	0		22.13	0 - 2	2
	64QAM	1	0		22.19	0 - 2	2
		1	24		22.08	0 - 2	2
		1	49		22.07	0 - 2	2
		25	0		21.12	0 - 3	3
		25	12		21.07	0 - 3	3
		25	24		21.06	0 - 3	3
		50	0		21.13	0 - 3	3
	256QAM	1	0		19.21	0 - 5	5
		1	24		19.11	0 - 5	5
		1	49		19.09	0 - 5	5
		25	0		19.09	0 - 5	5
		25	12		19.06	0 - 5	5
		25	24		19.06	0 - 5	5
		50	0		19.10	0 - 5	5

11.3.8 LTE FDD Band 25 Maximum Conducted Power

LTE Band 25 Conducted Power_ Measured Pmax_Antenna.A

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	24.03	24.03	23.97	0	0
		1	49	24.02	23.96	23.90	0	0
		1	99	24.05	23.93	23.85	0	0
		50	0	23.16	23.08	23.02	0 - 1	1
		50	25	23.15	23.05	23.05	0 - 1	1
		50	49	23.10	23.05	23.01	0 - 1	1
		100	0	23.12	23.07	22.98	0 - 1	1
	16QAM	1	0	23.28	23.33	23.29	0 - 1	1
		1	49	23.27	23.21	23.17	0 - 1	1
		1	99	23.49	23.29	23.16	0 - 1	1
		50	0	22.17	22.09	21.99	0 - 2	2
		50	25	22.14	22.05	22.02	0 - 2	2
		50	49	22.18	22.01	22.01	0 - 2	2
		100	0	22.15	22.06	21.99	0 - 2	2
	64QAM	1	0	22.17	22.25	22.14	0 - 2	2
		1	49	22.29	22.16	22.17	0 - 2	2
		1	99	22.35	22.20	22.13	0 - 2	2
		50	0	21.13	21.04	21.02	0 - 3	3
		50	25	21.14	21.06	20.98	0 - 3	3
		50	49	21.10	21.05	20.98	0 - 3	3
		100	0	21.10	20.97	20.94	0 - 3	3
	256QAM	1	0	19.16	19.16	19.06	0 - 5	5
		1	49	19.23	19.07	19.02	0 - 5	5
		1	99	19.20	19.04	19.00	0 - 5	5
		50	0	19.08	18.99	18.95	0 - 5	5
		50	25	19.09	19.00	18.94	0 - 5	5
		50	49	19.06	18.96	18.91	0 - 5	5
		100	0	19.07	18.98	18.91	0 - 5	5

LTE Band 25 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	18.03	18.06	18.04	0	0
		1	49	18.19	18.08	18.05	0	0
		1	99	18.06	17.93	18.00	0	0
		50	0	18.09	18.14	17.98	0 - 1	0
		50	25	18.17	18.12	18.00	0 - 1	0
		50	49	18.12	18.05	18.06	0 - 1	0
		100	0	18.19	18.06	18.03	0 - 1	0
	16QAM	1	0	18.15	18.15	18.05	0 - 1	0
		1	49	18.15	18.06	18.05	0 - 1	0
		1	99	18.25	18.21	18.06	0 - 1	0
		50	0	17.90	17.83	17.76	0 - 2	0
		50	25	17.94	17.83	17.80	0 - 2	0
		50	49	17.87	17.90	17.86	0 - 2	0
		100	0	17.90	17.88	17.74	0 - 2	0
	64QAM	1	0	17.97	18.06	17.92	0 - 2	0
		1	49	18.08	18.08	18.03	0 - 2	0
		1	99	18.00	18.01	17.95	0 - 2	0
		50	0	17.94	17.85	17.84	0 - 3	0
		50	25	17.96	17.83	17.84	0 - 3	0
		50	49	17.99	17.92	17.84	0 - 3	0
		100	0	17.96	17.85	17.82	0 - 3	0
	256QAM	1	0	18.02	17.85	17.87	0 - 5	0
		1	49	18.07	17.97	17.86	0 - 5	0
		1	99	18.09	17.93	17.97	0 - 5	0
		50	0	17.89	17.86	17.86	0 - 5	0
		50	25	17.94	17.83	17.79	0 - 5	0
		50	49	17.94	17.87	17.83	0 - 5	0
		100	0	18.00	17.80	17.76	0 - 5	0

LTE Band 25 Conducted Power_ Measured RCV(RSI=1) _Antenna.A

LTE Band 25_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				26140 Ch. 1860 MHz	26365 Ch. 1882.5 MHz	26590 Ch. 1905 MHz		
20 MHz	QPSK	1	0	19.18	19.14	19.07	0	0
		1	49	19.34	19.27	19.20	0	0
		1	99	19.20	19.24	19.12	0	0
		50	0	19.22	19.26	19.26	0 - 1	0
		50	25	19.29	19.28	19.16	0 - 1	0
		50	49	19.25	19.14	19.13	0 - 1	0
		100	0	19.21	19.25	19.12	0 - 1	0
	16QAM	1	0	19.46	19.46	19.43	0 - 1	0
		1	49	19.53	19.54	19.39	0 - 1	0
		1	99	19.46	19.56	19.43	0 - 1	0
		50	0	19.23	19.20	19.19	0 - 2	0
		50	25	19.28	19.27	19.26	0 - 2	0
		50	49	19.31	19.36	19.26	0 - 2	0
		100	0	19.22	19.25	19.21	0 - 2	0
	64QAM	1	0	19.40	19.46	19.29	0 - 2	0
		1	49	19.14	19.01	18.91	0 - 2	0
		1	99	19.33	19.38	19.30	0 - 2	0
		50	0	19.28	19.16	19.29	0 - 3	0
		50	25	19.29	19.17	19.21	0 - 3	0
		50	49	19.30	19.21	19.21	0 - 3	0
		100	0	19.24	19.12	19.10	0 - 3	0
	256QAM	1	0	19.29	19.34	19.26	0 - 5	1
		1	49	19.29	19.19	19.09	0 - 5	1
		1	99	19.19	19.26	19.13	0 - 5	1
		50	0	19.23	19.22	19.19	0 - 5	1
		50	25	19.27	19.18	19.20	0 - 5	1
		50	49	19.27	19.22	19.16	0 - 5	1
		100	0	19.24	19.18	19.14	0 - 5	1

11.3.9 LTE FDD Band 26 Maximum Conducted Power

LTE Band 26 Conducted Power_ Measured Pmax ,RCV(RSI=1) _Antenna.A

LTE Band 26_15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0		24.48	0	0
		1	36		24.43	0	0
		1	74		24.35	0	0
		36	0		23.60	0 - 1	1
		36	18		23.52	0 - 1	1
		36	39		23.47	0 - 1	1
		75	0		23.60	0 - 1	1
	16QAM	1	0		23.79	0 - 1	1
		1	36		23.67	0 - 1	1
		1	74		23.55	0 - 1	1
		36	0		22.56	0 - 2	2
		36	18		22.50	0 - 2	2
		36	39		22.45	0 - 2	2
		75	0		22.50	0 - 2	2
	64QAM	1	0		22.75	0 - 2	2
		1	36		22.32	0 - 2	2
		1	74		22.55	0 - 2	2
		36	0		21.58	0 - 3	3
		36	18		21.54	0 - 3	3
		36	39		21.47	0 - 3	3
		75	0		21.52	0 - 3	3
	256QAM	1	0		19.70	0 - 5	5
		1	36		19.53	0 - 5	5
		1	74		19.48	0 - 5	5
		36	0		19.57	0 - 5	5
		36	18		19.53	0 - 5	5
		36	39		19.49	0 - 5	5
		75	0		19.55	0 - 5	5

LTE Band 26 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 26_15 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					26865 Ch. 831.5 MHz		
15 MHz	QPSK	1	0		22.27	0	0
		1	36		22.19	0	0
		1	74		22.12	0	0
		36	0		22.29	0 - 1	0
		36	18		22.24	0 - 1	0
		36	39		22.25	0 - 1	0
		75	0		22.28	0 - 1	0
	16QAM	1	0		22.46	0 - 1	0
		1	36		22.40	0 - 1	0
		1	74		22.49	0 - 1	0
		36	0		22.31	0 - 2	0.5
		36	18		22.27	0 - 2	0.5
		36	39		22.22	0 - 2	0.5
		75	0		22.27	0 - 2	0.5
	64QAM	1	0		22.44	0 - 2	0.5
		1	36		22.09	0 - 2	0.5
		1	74		22.27	0 - 2	0.5
		36	0		21.41	0 - 3	1.5
		36	18		21.39	0 - 3	1.5
		36	39		21.35	0 - 3	1.5
		75	0		21.35	0 - 3	1.5
	256QAM	1	0		19.49	0 - 5	3.5
		1	36		19.30	0 - 5	3.5
		1	74		19.37	0 - 5	3.5
		36	0		19.41	0 - 5	3.5
		36	18		19.39	0 - 5	3.5
		36	39		19.33	0 - 5	3.5
		75	0		19.38	0 - 5	3.5

11.3.10 LTE FDD Band 30 Maximum Conducted Power

LTE Band 30 Conducted Power_ Measured Pmax,RCV(RSI=1) _Antenna.A

LTE Band 30_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 MHz			
10 MHz	QPSK	1	0		21.31		0	0
		1	24		21.30		0	0
		1	49		21.28		0	0
		25	0		20.37		0 - 1	1
		25	12		20.35		0 - 1	1
		25	24		20.36		0 - 1	1
		50	0		20.41		0 - 1	1
	16QAM	1	0		20.57		0 - 1	1
		1	24		20.54		0 - 1	1
		1	49		20.58		0 - 1	1
		25	0		19.40		0 - 2	2
		25	12		19.36		0 - 2	2
		25	24		19.33		0 - 2	2
		50	0		19.39		0 - 2	2
	64QAM	1	0		19.50		0 - 2	2
		1	24		19.54		0 - 2	2
		1	49		19.49		0 - 2	2
		25	0		18.35		0 - 3	3
		25	12		18.32		0 - 3	3
		25	24		18.31		0 - 3	3
		50	0		18.35		0 - 3	3
	256QAM	1	0		16.44		0 - 5	5
		1	24		16.36		0 - 5	5
		1	49		16.41		0 - 5	5
		25	0		15.35		0 - 5	5
		25	12		15.31		0 - 5	5
		25	24		15.31		0 - 5	5
		50	0		15.36		0 - 5	5

LTE Band 30 Conducted Power_ Measured Free(RSI=0) _Antenna.A

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					27710 Ch. 2310 MHz		
10 MHz	QPSK	1	0		18.47	0	0
		1	24		18.48	0	0
		1	49		18.44	0	0
		25	0		18.49	0 - 1	0
		25	12		18.53	0 - 1	0
		25	24		18.54	0 - 1	0
		50	0		18.56	0 - 1	0
	16QAM	1	0		18.62	0 - 1	0
		1	24		18.65	0 - 1	0
		1	49		18.74	0 - 1	0
		25	0		18.48	0 - 2	0
		25	12		18.49	0 - 2	0
		25	24		18.53	0 - 2	0
		50	0		18.53	0 - 2	0
	64QAM	1	0		18.55	0 - 2	0
		1	24		18.60	0 - 2	0
		1	49		18.63	0 - 2	0
		25	0		18.50	0 - 3	0.5
		25	12		18.50	0 - 3	0.5
		25	24		18.49	0 - 3	0.5
		50	0		18.53	0 - 3	0.5
	256QAM	1	0		16.65	0 - 5	2.5
		1	24		16.70	0 - 5	2.5
		1	49		16.67	0 - 5	2.5
		25	0		15.63	0 - 5	2.5
		25	12		15.57	0 - 5	2.5
		25	24		15.62	0 - 5	2.5
		50	0		15.62	0 - 5	2.5

11.3.10 LTE TDD Band 38 Maximum Conducted Power

LTE Band 38 Conducted Power_ Measured Pmax,RCV(RSI=1) _Antenna.A

LTE Band 38_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 Ch. 2580 MHz	38000 Ch. 2595 MHz	38150 Ch. 2610 MHz		
20 MHz	QPSK	1	0	22.60	22.68	22.42	0	0
		1	49	22.40	22.43	22.25	0	0
		1	99	22.52	22.55	22.35	0	0
		50	0	22.16	22.21	22.03	0 - 1	1
		50	25	22.14	22.17	21.99	0 - 1	1
		50	49	22.11	22.14	21.96	0 - 1	1
		100	0	22.14	22.17	21.99	0 - 1	1
	16QAM	1	0	22.40	22.44	22.27	0 - 1	1
		1	49	22.35	22.37	22.19	0 - 1	1
		1	99	22.28	22.27	22.09	0 - 1	1
		50	0	21.22	21.26	21.08	0 - 2	2
		50	25	21.18	21.21	21.03	0 - 2	2
		50	49	21.16	21.18	20.99	0 - 2	2
		100	0	21.17	21.20	21.03	0 - 2	2
	64QAM	1	0	21.14	21.19	21.02	0 - 2	2
		1	49	21.07	21.09	20.91	0 - 2	2
		1	99	21.01	21.01	20.82	0 - 2	2
		50	0	20.24	20.28	20.11	0 - 3	3
		50	25	20.21	20.25	20.07	0 - 3	3
		50	49	20.18	20.20	20.02	0 - 3	3
		100	0	20.16	20.19	20.01	0 - 3	3
	256QAM	1	0	18.14	18.19	18.02	0 - 5	5
		1	49	18.16	18.18	18.01	0 - 5	5
		1	99	18.04	18.05	17.86	0 - 5	5
		50	0	18.23	18.28	18.11	0 - 5	5
		50	25	18.20	18.24	18.07	0 - 5	5
		50	49	18.18	18.21	18.03	0 - 5	5
		100	0	18.14	18.18	18.00	0 - 5	5

LTE Band 38 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 38_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				37850 Ch. 2580 MHz	38000 Ch. 2595 MHz	38150 Ch. 2610 MHz		
20 MHz	QPSK	1	0	18.26	18.33	18.18	0	0
		1	49	18.27	18.34	18.21	0	0
		1	99	18.15	18.19	18.06	0	0
		50	0	18.28	18.33	18.21	0 - 1	0
		50	25	18.26	18.31	18.18	0 - 1	0
		50	49	18.24	18.28	18.15	0 - 1	0
		100	0	18.28	18.31	18.19	0 - 1	0
	16QAM	1	0	18.26	18.31	18.20	0 - 1	0
		1	49	18.20	18.24	18.11	0 - 1	0
		1	99	18.20	18.22	18.10	0 - 1	0
		50	0	18.31	18.34	18.22	0 - 2	0
		50	25	18.29	18.32	18.19	0 - 2	0
		50	49	18.26	18.28	18.17	0 - 2	0
		100	0	18.30	18.33	18.22	0 - 2	0
	64QAM	1	0	17.94	17.99	17.88	0 - 2	0
		1	49	18.01	18.03	17.92	0 - 2	0
		1	99	17.90	17.91	17.80	0 - 2	0
		50	0	18.33	18.37	18.25	0 - 3	0
		50	25	18.32	18.35	18.23	0 - 3	0
		50	49	18.29	18.32	18.21	0 - 3	0
		100	0	18.28	18.30	18.20	0 - 3	0
	256QAM	1	0	18.02	18.07	17.96	0 - 5	0.5
		1	49	18.03	18.05	17.94	0 - 5	0.5
		1	99	17.97	17.98	17.87	0 - 5	0.5
		50	0	18.25	18.29	18.18	0 - 5	0.5
		50	25	18.23	18.26	18.15	0 - 5	0.5
		50	49	18.22	18.23	18.11	0 - 5	0.5
		100	0	18.21	18.23	18.12	0 - 5	0.5

11.3.11 LTE TDD Band 41 Maximum Conducted Power

LTE Band 41 Conducted Power_ Measured Pmax, RCV(RSI=1) _Antenna.A

LTE Band 41_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680 MHz		
20 MHz	QPSK	1	0	23.39	23.29	23.23	23.28	23.66	0	0
		1	49	23.40	23.28	23.20	23.24	23.64	0	0
		1	99	23.37	23.26	23.12	23.18	23.60	0	0
		50	0	22.48	22.32	22.23	22.28	22.70	0 - 1	1
		50	25	22.46	22.32	22.22	22.25	22.69	0 - 1	1
		50	49	22.45	22.31	22.18	22.23	22.67	0 - 1	1
		100	0	22.47	22.32	22.22	22.27	22.71	0 - 1	1
	16QAM	1	0	22.46	22.31	22.25	22.30	22.72	0 - 1	1
		1	49	22.37	22.22	22.12	22.18	22.62	0 - 1	1
		1	99	22.45	22.30	22.17	22.23	22.66	0 - 1	1
		50	0	21.52	21.34	21.26	21.31	21.74	0 - 2	2
		50	25	21.51	21.34	21.24	21.29	21.73	0 - 2	2
		50	49	21.49	21.33	21.21	21.27	21.71	0 - 2	2
		100	0	21.51	21.34	21.26	21.31	21.74	0 - 2	2
	64QAM	1	0	21.14	20.97	20.91	20.96	21.39	0 - 2	2
		1	49	21.16	20.99	20.90	20.96	21.40	0 - 2	2
		1	99	21.13	20.98	20.85	20.91	21.35	0 - 2	2
		50	0	20.52	20.35	20.28	20.33	20.76	0 - 3	3
		50	25	20.50	20.34	20.24	20.30	20.74	0 - 3	3
		50	49	20.49	20.33	20.23	20.28	20.71	0 - 3	3
		100	0	20.46	20.30	20.20	20.27	20.69	0 - 3	3
	256QAM	1	0	18.26	18.09	18.03	18.09	18.51	0 - 5	5
		1	49	18.26	18.10	18.01	18.08	18.50	0 - 5	5
		1	99	18.24	18.09	17.96	18.02	18.46	0 - 5	5
		50	0	18.49	18.33	18.25	18.30	18.73	0 - 5	5
		50	25	18.48	18.32	18.22	18.28	18.71	0 - 5	5
		50	49	18.46	18.30	18.19	18.25	18.69	0 - 5	5
		100	0	18.43	18.28	18.19	18.24	18.68	0 - 5	5

LTE Band 41 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 41_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR Allowed Per 3GPP [dB]	MPR [dB]
				39750 Ch. 2506 MHz	40185 Ch. 2549.5 MHz	40620 Ch. 2593 MHz	41055 Ch. 2636.5 MHz	41490 Ch. 2680 MHz		
20 MHz	QPSK	1	0	18.41	18.29	18.48	18.25	18.70	0	0
		1	49	18.34	18.22	18.11	18.15	18.60	0	0
		1	99	18.36	18.23	18.09	18.13	18.58	0	0
		50	0	18.46	18.32	18.21	18.26	18.70	0 - 1	0
		50	25	18.45	18.31	18.20	18.24	18.69	0 - 1	0
		50	49	18.42	18.29	18.16	18.21	18.66	0 - 1	0
	16QAM	100	0	18.45	18.32	18.21	18.25	18.70	0 - 1	0
		1	0	18.42	18.27	18.20	18.25	18.69	0 - 1	0
		1	49	18.23	18.09	17.99	18.03	18.48	0 - 1	0
		1	99	18.40	18.26	18.13	18.17	18.61	0 - 1	0
		50	0	18.48	18.32	18.23	18.27	18.71	0 - 2	0
		50	25	18.47	18.33	18.23	18.26	18.71	0 - 2	0
	64QAM	50	49	18.47	18.31	18.20	18.24	18.69	0 - 2	0
		100	0	18.48	18.33	18.24	18.28	18.72	0 - 2	0
		1	0	18.10	17.95	17.90	17.93	18.36	0 - 2	0
		1	49	18.07	17.92	17.83	17.87	18.30	0 - 2	0
		1	99	18.11	17.97	17.83	17.88	18.32	0 - 2	0
		50	0	18.51	18.35	18.27	18.31	18.74	0 - 3	0
	256QAM	50	25	18.49	18.34	18.25	18.28	18.73	0 - 3	0
		50	49	18.49	18.34	18.22	18.27	18.71	0 - 3	0
		100	0	18.46	18.31	18.21	18.25	18.69	0 - 3	0
		1	0	18.18	18.02	17.96	18.02	18.44	0 - 5	0.5
		1	49	18.11	17.96	17.86	17.91	18.34	0 - 5	0.5
		1	99	18.18	18.04	17.91	17.94	18.39	0 - 5	0.5
		50	0	18.42	18.27	18.19	18.24	18.67	0 - 5	0.5
		50	25	18.41	18.26	18.16	18.21	18.65	0 - 5	0.5
		50	49	18.41	18.25	18.14	18.19	18.63	0 - 5	0.5
		100	0	18.37	18.23	18.13	18.19	18.63	0 - 5	0.5

11.3.12 LTE TDD Band 48 Maximum Conducted Power

LTE Band 48 Conducted Power_ Measured Pmax_Antenna.G

LTE Band 48_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR Allowed Per 3GPP [dB]	MPR [dB]
				55340 Ch. 3560 MHz	55773 Ch. 3603.3 MHz	56207 Ch. 3646.7 MHz	56640 Ch. 3690 MHz		
20 MHz	QPSK	1	0	21.29	21.45	21.02	20.94	0	0
		1	49	21.32	21.43	21.02	20.97	0	0
		1	99	21.35	21.42	21.04	21.02	0	0
		50	0	20.33	20.51	20.06	20.01	0 - 1	1
		50	25	20.35	20.50	20.08	20.03	0 - 1	1
		50	49	20.38	20.49	20.08	20.06	0 - 1	1
		100	0	20.35	20.49	20.09	20.03	0 - 1	1
	16QAM	1	0	20.33	20.53	20.09	19.98	0 - 1	1
		1	49	20.26	20.40	19.97	19.92	0 - 1	1
		1	99	20.43	20.52	20.12	20.09	0 - 1	1
		50	0	19.37	19.55	19.10	19.04	0 - 2	2
		50	25	19.41	19.56	19.13	19.08	0 - 2	2
		50	49	19.43	19.54	19.12	19.09	0 - 2	2
		100	0	19.40	19.53	19.12	19.07	0 - 2	2
	64QAM	1	0	19.00	19.20	18.75	18.65	0 - 2	2
		1	49	19.04	19.19	18.75	18.70	0 - 2	2
		1	99	19.12	19.21	18.81	18.78	0 - 2	2
		50	0	18.40	18.58	18.14	18.08	0 - 3	3
		50	25	18.43	18.57	18.15	18.10	0 - 3	3
		50	49	18.45	18.56	18.15	18.11	0 - 3	3
		100	0	18.38	18.51	18.10	18.04	0 - 3	3
	256QAM	1	0	16.17	16.39	15.92	15.83	0 - 5	5
		1	49	16.21	16.36	15.92	15.86	0 - 5	5
		1	99	16.29	16.39	15.98	15.95	0 - 5	5
		50	0	15.41	15.57	15.14	15.07	0 - 5	5
		50	25	15.44	15.56	15.14	15.10	0 - 5	5
		50	49	15.45	15.55	15.14	15.11	0 - 5	5
		100	0	15.39	15.52	15.10	15.05	0 - 5	5

LTE Band 48 Conducted Power_ Measured Free(RSI=0) , RCV(RSI=1) _ Antenna.G

LTE Band 48_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR Allowed Per 3GPP [dB]	MPR [dB]
				55340 Ch.	55773 Ch.	56207 Ch.	56640 Ch.		
				3560 MHz	3603.3 MHz	3646.7 MHz	3690 MHz		
20 MHz	QPSK	1	0	15.93	16.25	15.68	15.65	0	0
		1	49	16.07	16.19	15.79	15.71	0	0
		1	99	15.99	16.04	15.69	15.79	0	0
		50	0	15.93	16.32	15.68	15.71	0 - 1	0
		50	25	15.96	16.08	15.69	15.69	0 - 1	0
		50	49	15.98	16.08	15.69	15.74	0 - 1	0
		100	0	15.98	16.09	15.69	15.72	0 - 1	0
	16QAM	1	0	15.95	16.15	15.73	15.68	0 - 1	0
		1	49	16.01	16.15	15.76	15.30	0 - 1	0
		1	99	16.05	16.12	15.77	15.74	0 - 1	0
		50	0	15.99	16.15	15.73	15.69	0 - 2	0
		50	25	16.01	16.14	15.75	15.64	0 - 2	0
		50	49	16.03	16.12	15.76	15.66	0 - 2	0
		100	0	16.02	16.14	15.75	15.73	0 - 2	0
	64QAM	1	0	15.62	15.80	15.39	15.37	0 - 2	0
		1	49	15.78	15.89	15.50	15.49	0 - 2	0
		1	99	15.74	15.80	15.46	15.42	0 - 2	0
		50	0	16.03	16.18	15.77	15.74	0 - 3	0
		50	25	16.05	16.17	15.79	15.73	0 - 3	0
		50	49	16.08	16.17	15.79	15.73	0 - 3	0
		100	0	16.01	16.13	15.73	15.73	0 - 3	0
	256QAM	1	0	15.81	15.99	15.58	15.55	0 - 5	0
		1	49	15.83	15.93	15.55	15.47	0 - 5	0
		1	99	15.92	15.99	15.65	15.63	0 - 5	0
		50	0	15.47	15.61	15.19	15.15	0 - 5	0
		50	25	15.48	15.58	15.19	15.13	0 - 5	0
		50	49	15.49	15.59	15.20	15.16	0 - 5	0
		100	0	15.44	15.56	15.16	15.13	0 - 5	0

11.3.13 LTE FDD Band 66 Maximum Conducted Power

LTE Band 66 Conducted Power_ Measured Pmax _Antenna.A

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	23.67	23.91	24.05	0	0
		1	49	23.68	23.91	24.00	0	0
		1	99	23.71	23.88	23.94	0	0
		50	0	22.79	23.06	23.13	0 - 1	1
		50	25	22.82	23.06	23.15	0 - 1	1
		50	49	22.86	23.03	23.20	0 - 1	1
		100	0	22.83	23.02	23.17	0 - 1	1
	16QAM	1	0	23.03	23.26	23.41	0 - 1	1
		1	49	22.99	23.15	23.37	0 - 1	1
		1	99	23.18	23.26	23.33	0 - 1	1
		50	0	21.85	22.04	22.17	0 - 2	2
		50	25	21.88	22.04	22.20	0 - 2	2
		50	49	21.84	22.03	22.18	0 - 2	2
		100	0	21.79	21.98	22.14	0 - 2	2
	64QAM	1	0	21.87	22.16	22.34	0 - 2	2
		1	49	21.89	22.12	22.30	0 - 2	2
		1	99	22.02	22.19	22.21	0 - 2	2
		50	0	20.81	21.07	21.20	0 - 3	3
		50	25	20.84	21.04	21.15	0 - 3	3
		50	49	20.83	21.02	21.16	0 - 3	3
		100	0	20.78	20.98	21.11	0 - 3	3
	256QAM	1	0	18.86	19.07	19.28	0 - 5	5
		1	49	18.91	19.09	19.25	0 - 5	5
		1	99	18.96	19.12	19.19	0 - 5	5
		50	0	18.77	18.99	19.14	0 - 5	5
		50	25	18.79	18.95	19.13	0 - 5	5
		50	49	18.74	18.99	19.12	0 - 5	5
		100	0	18.82	18.97	19.14	0 - 5	5

LTE Band 66 Conducted Power_ Measured Free(RSI=0) _Antenna.A

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	17.10	17.31	17.51	0	0
		1	49	17.15	17.35	17.50	0	0
		1	99	17.17	17.31	17.46	0	0
		50	0	17.21	17.39	17.57	0 - 1	0
		50	25	17.23	17.47	17.62	0 - 1	0
		50	49	17.22	17.43	17.63	0 - 1	0
		100	0	17.22	17.42	17.56	0 - 1	0
	16QAM	1	0	17.42	17.66	17.87	0 - 1	0
		1	49	17.40	17.56	17.76	0 - 1	0
		1	99	17.57	17.70	17.85	0 - 1	0
		50	0	17.23	17.42	17.56	0 - 2	0
		50	25	17.24	17.46	17.61	0 - 2	0
		50	49	17.21	17.42	17.58	0 - 2	0
		100	0	17.21	17.40	17.56	0 - 2	0
	64QAM	1	0	17.31	17.49	17.72	0 - 2	0
		1	49	17.37	17.58	17.77	0 - 2	0
		1	99	17.41	17.55	17.64	0 - 2	0
		50	0	17.23	17.43	17.59	0 - 3	0
		50	25	17.19	17.46	17.61	0 - 3	0
		50	49	17.25	17.43	17.61	0 - 3	0
		100	0	17.18	17.36	17.53	0 - 3	0
	256QAM	1	0	17.29	17.48	17.69	0 - 5	0
		1	49	17.37	17.56	17.75	0 - 5	0
		1	99	17.39	17.54	17.73	0 - 5	0
		50	0	17.25	17.42	17.58	0 - 5	0
		50	25	17.22	17.39	17.60	0 - 5	0
		50	49	17.25	17.43	17.63	0 - 5	0
		100	0	17.31	17.46	17.64	0 - 5	0

LTE Band 66 Conducted Power_ Measured RCV(RSI=1) _Antenna.A

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	19.10	19.38	19.56	0	0
		1	49	19.18	19.48	19.54	0	0
		1	99	19.19	19.45	19.47	0	0
		50	0	19.15	19.47	19.49	0 - 1	0
		50	25	19.23	19.42	19.53	0 - 1	0
		50	49	19.21	19.46	19.62	0 - 1	0
		100	0	19.25	19.47	19.58	0 - 1	0
	16QAM	1	0	19.43	19.60	19.69	0 - 1	0
		1	49	19.42	19.66	19.72	0 - 1	0
		1	99	19.44	19.67	19.66	0 - 1	0
		50	0	19.15	19.51	19.61	0 - 2	0
		50	25	19.26	19.49	19.48	0 - 2	0
		50	49	19.27	19.53	19.58	0 - 2	0
		100	0	19.17	19.39	19.55	0 - 2	0
	64QAM	1	0	19.35	19.54	19.58	0 - 2	0
		1	49	19.10	19.26	19.22	0 - 2	0
		1	99	19.42	19.58	19.61	0 - 2	0
		50	0	19.20	19.38	19.51	0 - 3	0
		50	25	19.20	19.41	19.39	0 - 3	0
		50	49	19.26	19.43	19.45	0 - 3	0
		100	0	19.18	19.44	19.48	0 - 3	0
	256QAM	1	0	18.75	18.98	19.06	0 - 5	1
		1	49	18.74	18.97	19.01	0 - 5	1
		1	99	18.88	19.03	19.06	0 - 5	1
		50	0	18.76	19.01	19.05	0 - 5	1
		50	25	18.81	18.92	19.03	0 - 5	1
		50	49	18.83	18.96	19.07	0 - 5	1
		100	0	18.72	18.94	18.97	0 - 5	1

LTE Band 66 Conducted Power_ Measured Pmax_Antenna.F

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	24.01	24.04	24.14	0	0
		1	49	23.91	24.07	24.03	0	0
		1	99	23.91	24.12	24.06	0	0
		50	0	23.07	23.41	23.26	0 - 1	1
		50	25	23.09	23.38	23.31	0 - 1	1
		50	49	23.10	23.33	23.29	0 - 1	1
		100	0	23.03	23.31	23.24	0 - 1	1
	16QAM	1	0	23.28	23.32	23.39	0 - 1	1
		1	49	23.18	23.24	23.20	0 - 1	1
		1	99	23.30	23.56	23.35	0 - 1	1
		50	0	22.09	22.29	22.20	0 - 2	2
		50	25	22.10	22.28	22.25	0 - 2	2
		50	49	22.10	22.27	22.25	0 - 2	2
		100	0	22.04	22.23	22.20	0 - 2	2
	64QAM	1	0	22.20	22.29	22.27	0 - 2	2
		1	49	22.14	22.27	22.28	0 - 2	2
		1	99	22.25	22.35	22.32	0 - 2	2
		50	0	21.09	21.29	21.24	0 - 3	3
		50	25	21.07	21.26	21.23	0 - 3	3
		50	49	21.08	21.25	21.22	0 - 3	3
		100	0	21.07	21.20	21.19	0 - 3	3
	256QAM	1	0	19.15	19.32	19.21	0 - 5	5
		1	49	19.26	19.24	19.24	0 - 5	5
		1	99	19.20	19.41	19.42	0 - 5	5
		50	0	19.06	19.21	19.19	0 - 5	5
		50	25	19.01	19.18	19.19	0 - 5	5
		50	49	19.04	19.21	19.21	0 - 5	5
		100	0	19.08	19.23	19.20	0 - 5	5

LTE Band 66 Conducted Power_ Measured Free(RSI=0) , RCV(RSI=1)_Antenna.F

LTE Band 66_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR Allowed Per 3GPP [dB]	MPR [dB]
				132072 Ch. 1720 MHz	132322 Ch. 1745 MHz	132572 Ch. 1770 MHz		
20 MHz	QPSK	1	0	18.26	18.46	18.34	0	0
		1	49	18.31	18.28	18.35	0	0
		1	99	18.19	18.44	18.45	0	0
		50	0	18.20	18.48	18.43	0 - 1	0
		50	25	18.22	18.45	18.47	0 - 1	0
		50	49	18.19	18.44	18.45	0 - 1	0
		100	0	18.22	18.39	18.39	0 - 1	0
	16QAM	1	0	18.66	18.76	18.72	0 - 1	0
		1	49	18.40	18.51	18.55	0 - 1	0
		1	99	18.61	18.86	18.83	0 - 1	0
		50	0	18.31	18.47	18.43	0 - 2	0
		50	25	18.30	18.43	18.50	0 - 2	0
		50	49	18.29	18.52	18.44	0 - 2	0
		100	0	18.28	18.45	18.37	0 - 2	0
	64QAM	1	0	18.43	18.64	18.65	0 - 2	0
		1	49	18.51	18.47	18.65	0 - 2	0
		1	99	18.49	18.70	18.68	0 - 2	0
		50	0	18.26	18.46	18.47	0 - 3	0
		50	25	18.31	18.49	18.40	0 - 3	0
		50	49	18.29	18.49	18.42	0 - 3	0
		100	0	18.24	18.44	18.43	0 - 3	0
	256QAM	1	0	18.16	18.33	18.41	0 - 5	0
		1	49	18.17	18.21	18.31	0 - 5	0
		1	99	18.20	18.45	18.41	0 - 5	0
		50	0	18.03	18.29	18.21	0 - 5	0
		50	25	18.08	18.24	18.24	0 - 5	0
		50	49	18.02	18.26	18.24	0 - 5	0
		100	0	18.05	18.26	18.21	0 - 5	0

11.3.14 LTE FDD Band 71 Maximum Conducted Power

LTE Band 71 Conducted Power_ Measured Pmax ,Free(RSI=0) , RCV(RSI=1) _Antenna.A

LTE Band 71_20 MHz Bandwidth Conducted Power

Bandwidth	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR Allowed Per 3GPP [dB]	MPR [dB]
					133322 Ch. 683 MHz		
20 MHz	QPSK	1	0		24.50	0	0
		1	49		24.34	0	0
		1	99		24.19	0	0
		50	0		23.67	0 - 1	1
		50	25		23.62	0 - 1	1
		50	49		23.54	0 - 1	1
		100	0		23.55	0 - 1	1
	16QAM	1	0		23.80	0 - 1	1
		1	49		23.64	0 - 1	1
		1	99		23.55	0 - 1	1
		50	0		22.61	0 - 2	2
		50	25		22.58	0 - 2	2
		50	49		22.49	0 - 2	2
		100	0		22.55	0 - 2	2
	64QAM	1	0		22.74	0 - 2	2
		1	49		22.56	0 - 2	2
		1	99		22.36	0 - 2	2
		50	0		21.60	0 - 3	3
		50	25		21.52	0 - 3	3
		50	49		21.44	0 - 3	3
		100	0		21.48	0 - 3	3
	256QAM	1	0		19.73	0 - 5	5
		1	49		19.57	0 - 5	5
		1	99		19.45	0 - 5	5
		50	0		19.59	0 - 5	5
		50	25		19.51	0 - 5	5
		50	49		19.41	0 - 5	5
		100	0		19.55	0 - 5	5

11.3.15 LTE Uplink Carrier Aggregation Maximum Conducted Output Power

Combination	PCC							SCC						Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	Mode	RB	offset	Band	BW	SCC UL Channel	SCC UL Frequency	RB	offset	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with UL CA Enabled(dBm)
48C	48	20	55773	3603.3	QPSK	1	0	48	20	55575	3583.5	1	99	16.25	15.75

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 n2 Maximum Conducted Power

NR FDD Band n2 Conducted Power_ Measured P_{max} _ Antenna A

NR FDD Band n2 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
						376000 Ch.	1880 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.80	0
				1	108		24.02	0
				1	214		23.77	0
				108	0		23.45	0.5
				108	54		23.91	0
				108	108		23.33	0.5
				216	0		23.42	0.5
			QPSK	1	1		23.86	0
				1	108		23.95	0
				1	214		23.82	0
				108	0		22.98	1
				108	54		23.96	0
				108	108		22.86	1
				216	0		22.97	1
			16QAM	1	1		22.90	1
			64QAM	1	1		21.21	2.5
			256QAM	1	1		19.19	4.0
		CP	QPSK	1	1		22.38	1.5

NR FDD Band n2 Conducted Power_ Measured Free(RSI = 0) _ Antenna A

NR FDD Band n2 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							376000 Ch. 1880 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		18.18	0
				1	108		18.02	0
				1	214		18.09	0
				108	0		18.13	0
				108	54		18.13	0
				108	108		18.13	0
				216	0		18.19	0
			QPSK	1	1		18.14	0
				1	108		18.06	0
				1	214		18.08	0
				108	0		18.16	0
				108	54		18.17	0
				108	108		18.14	0
				216	0		18.18	0
			16QAM	1	1		18.19	0
			64QAM	1	1		18.29	0
			256QAM	1	1		18.15	0
		CP	QPSK	1	1		18.17	0

NR FDD Band n2 Conducted Power_ Measured RCV(RSI = 1) _ Antenna A

NR FDD Band n2 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							376000 Ch. 1880 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		19.48	0
				1	108		19.45	0
				1	214		19.65	0
				108	0		19.06	0
				108	54		19.57	0
				108	108		18.99	0
				216	0		19.02	0
			QPSK	1	1		19.59	0
				1	108		19.56	0
				1	214		19.54	0
				108	0		19.54	0
				108	54		19.44	0
				108	108		19.71	0
				216	0		19.52	0
			16QAM	1	1		19.55	0
			64QAM	1	1		19.56	0
			256QAM	1	1		19.54	0
		CP	QPSK	1	1		19.49	0

NR FDD Band n2 Conducted Power_ Measured P_{max} _ Antenna F
NR Band n2_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							376000 Ch. 1880 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		24.13		0
				1	108		24.50		0
				1	214		24.10		0
				108	0		23.84		0.5
				108	54		24.32		0
				108	108		23.78		0.5
				216	0		23.81		0.5
			QPSK	1	1		24.30		0
				1	108		24.50		0
				1	214		24.19		0
				108	0		23.38		1
				108	54		24.33		0
				108	108		23.29		1
				216	0		23.33		1
			16QAM	1	1		23.29		1
			64QAM	1	1		21.78		2.5
			256QAM	1	1		19.78		4.5
		CP	QPSK	1	1		22.73		1.5

NR FDD Band n2 Conducted Power_ Measured Free(RSI=0) , RCV(RSI = 1)_ Antenna F
NR Band n2_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							376000 Ch. 1880 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		17.55		0
				1	108		17.65		0
				1	214		17.51		0
				108	0		17.65		0
				108	54		17.69		0
				108	108		17.63		0
				216	0		17.66		0
			QPSK	1	1		17.70		0
				1	108		17.69		0
				1	214		17.49		0
				108	0		17.71		0
				108	54		17.65		0
				108	108		17.60		0
				216	0		17.65		0
			16QAM	1	1		17.74		0
			64QAM	1	1		17.50		0
			256QAM	1	1		17.60		0
		CP	QPSK	1	1		17.60		0

11.4.2 NR FDD Band n5 Maximum Conducted Power

NR FDD Band n5 Conducted Power_ Measured Pmax, RCV(RSI = 1)_Antenna A

NR Band n5_20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							167300 Ch. 836.5 MHz	
20 MHz	15	DFT-s	pi/2 BPSK	1	1		24.22	0
				1	53		24.49	0
				1	104		24.44	0
				50	0		23.83	0.5
				50	28		24.35	0
				50	56		23.88	0.5
				100	0		23.84	0.5
			QPSK	1	1		24.26	0
				1	53		24.47	0
				1	104		24.43	0
				50	0		23.31	1
				50	28		24.37	0
				50	56		23.41	1
				100	0		23.41	1
			16QAM	1	1		23.34	1
			64QAM	1	1		21.90	2.5
			256QAM	1	1		19.76	4.5
		CP	QPSK	1	1		22.86	1.5

NR FDD Band n5 Conducted Power_ Measured Free(RSI=0)_ Antenna A

NR Band n5_20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							167300 Ch. 836.5 MHz	
20 MHz	15	DFT-s	pi/2 BPSK	1	1		22.43	0
				1	53		22.22	0
				1	104		22.37	0
				50	0		22.44	0
				50	28		22.40	0
				50	56		22.37	0
				100	0		22.41	0
			QPSK	1	1		22.38	0
				1	53		22.39	0
				1	104		22.44	0
				50	0		22.43	0
				50	28		22.50	0
				50	56		22.42	0
				100	0		22.46	0
			16QAM	1	1		22.58	0
			64QAM	1	1		22.07	1
			256QAM	1	1		19.88	3
		CP	QPSK	1	1		22.44	0

11.4.3 NR FDD Band n25 Maximum Conducted Power

NR FDD Band n25 Conducted Power_ Measured Pmax_Antenna A

NR Band n25_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							376500 Ch. 1882.5 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.83	0
				1	108		23.92	0
				1	214		23.76	0
				108	0		23.38	0.5
				108	54		23.87	0
				108	108		23.29	0.5
				216	0		23.35	0.5
			QPSK	1	1		23.86	0
				1	108		23.96	0
				1	214		23.79	0
				108	0		22.93	1
				108	54		23.90	0
				108	108		22.83	1
				216	0		22.90	1
			16QAM	1	1		23.02	1
			64QAM	1	1		21.60	2.5
			256QAM	1	1		19.24	4.0
		CP	QPSK	1	1		22.27	1.5

NR FDD Band n25 Conducted Power_ Measured Free(RSI=0)_Antenna A

NR Band n25_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							376500 Ch. 1882.5 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		18.17	0
				1	108		18.00	0
				1	214		18.14	0
				108	0		18.11	0
				108	54		18.14	0
				108	108		18.17	0
				216	0		18.13	0
			QPSK	1	1		18.09	0
				1	108		18.35	0
				1	214		18.16	0
				108	0		18.15	0
				108	54		18.14	0
				108	108		18.12	0
				216	0		18.20	0
			16QAM	1	1		18.14	0
			64QAM	1	1		18.24	0
			256QAM	1	1		18.16	0
		CP	QPSK	1	1		18.19	0

NR FDD Band n25 Conducted Power_ Measured RCV(RSI = 1) _Antenna A

NR Band n25_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							376500 Ch. 1882.5 MHz	
40 MHz	15	DFT-s	pi/2 BPSK	1	1		19.56	0
				1	108		19.46	0
				1	214		19.67	0
				108	0		19.11	0
				108	54		19.61	0
				108	108		19.07	0
				216	0		19.08	0
			QPSK	1	1		19.66	0
				1	108		19.57	0
				1	214		19.60	0
				108	0		19.72	0
				108	54		19.51	0
				108	108		19.71	0
				216	0		19.52	0
			16QAM	1	1		19.59	0
			64QAM	1	1		19.57	0
			256QAM	1	1		19.59	0
		CP	QPSK	1	1		19.52	0

11.4.4 NR FDD Band n30 Maximum Conducted Power

NR FDD Band n30 Conducted Power_ Measured Pmax, RCV(RSI = 1)_Antenna A

NR Band n30_10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							462000 Ch. 2310 MHz	
10 MHz	15	DFT-s	pi/2 BPSK	1	1		21.46	0
				1	26		21.51	0
				1	50		21.41	0
				25	0		20.95	0.5
				25	14		21.41	0
				25	27		20.92	0.5
				50	0		20.94	0.5
			QPSK	1	1		21.49	0
				1	26		21.45	0
				1	50		21.45	0
				25	0		20.52	1
				25	14		21.47	0
				25	27		20.49	1
				50	0		20.48	1
			16QAM	1	1		20.56	1
			64QAM	1	1		19.07	2.5
			256QAM	1	1		16.93	4.5
		CP	QPSK	1	1		19.99	1.5

NR FDD Band n30 Conducted Power_ Measured Free(RSI=0)_ Antenna A

NR Band n30_10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							462000 Ch. 2310 MHz	
10 MHz	15	DFT-s	pi/2 BPSK	1	1		18.71	0
				1	26		18.74	0
				1	50		18.61	0
				25	0		18.68	0
				25	14		18.65	0
				25	27		18.64	0
				50	0		18.71	0
			QPSK	1	1		18.78	0
				1	26		18.70	0
				1	50		18.65	0
				25	0		18.75	0
				25	14		18.69	0
				25	27		18.69	0
				50	0		18.72	0
			16QAM	1	1		18.70	0
			64QAM	1	1		18.74	0
			256QAM	1	1		17.23	2
		CP	QPSK	1	1		18.80	0

11.4.5 NR FDD Band n41 Maximum Conducted Power

NR FDD Band n41 Conducted Power_ Measured Pmax, RCV(RSI = 1)_Antenna A

NR Band n41_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							518598 Ch. 2592.99 MHz	
100MHz	30	DFT-s	pi/2 BPSK	1	1		26.59	0
				1	137		26.43	0
				1	271		26.21	0
				135	0		25.55	0
				135	69		26.53	0
				135	138		25.34	0
				270	0		25.52	0
			QPSK	1	1		26.80	0
				1	137		26.21	0
				1	271		25.87	0
				135	0		25.61	0
				135	69		26.40	0
				135	138		25.37	0
				270	0		25.57	0
			16QAM	1	1		25.99	0
			64QAM	1	1		24.35	0
			256QAM	1	1		22.28	0
		CP	QPSK	1	1		25.13	0

NR FDD Band n41 Conducted Power_ Measured Free(RSI=0)_Antenna A

NR Band n41_100 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							518598 Ch. 2592.99 MHz	
100MHz	30	DFT-s	pi/2 BPSK	1	1		16.17	0
				1	137		16.34	0
				1	271		16.35	0
				135	0		16.45	0
				135	69		16.44	0
				135	138		16.22	0
				270	0		16.41	0
			QPSK	1	1		16.61	0
				1	137		16.38	0
				1	271		16.36	0
				135	0		16.48	0
				135	69		16.45	0
				135	138		16.25	0
				270	0		16.44	0
			16QAM	1	1		16.88	0
			64QAM	1	1		16.85	0
			256QAM	1	1		16.61	0
		CP	QPSK	1	1		16.66	0

11.4.6 NR FDD Band n48 Maximum Conducted Power

NR FDD Band n48 Conducted Power_ Measured Pmax, RCV(RSI = 1)_Antenna G

NR Band n48_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR [dB]
						638000 Ch. 3570 MHz	641666 Ch. 3624.99 MHz		645334 Ch. 3680.01 MHz	
40 MHz	30	DFT-s	pi/2 BPSK	1	1	21.01	20.20		20.23	0
				1	53	21.19	21.22		20.51	0
				1	104	21.09	20.75		20.59	0
				50	0	20.68	20.77		19.96	0.5
				50	28	21.20	20.54		20.50	0
				50	56	20.70	20.12		20.14	0.5
				100	0	20.71	20.77		19.98	0.5
			QPSK	1	1	20.95	21.45		20.31	0
				1	53	21.11	21.13		20.38	0
				1	104	21.02	20.66		20.51	0
				50	0	20.21	20.33		20.51	1
				50	28	21.23	21.55		20.52	0
				50	56	20.21	20.07		19.58	1
				100	0	20.21	20.26		19.52	1
			16QAM	1	1	20.15	20.54		20.54	1
			64QAM	1	1	18.47	17.69		18.51	2.5
			256QAM	1	1	16.56	16.72		15.91	4.5
		CP	QPSK	1	1	19.58	19.75		18.91	1.5

NR FDD Band n48 Conducted Power_ Measured Free(RSI=0)_ Antenna G

NR Band n48_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]				MPR [dB]
						638000 Ch. 3570 MHz	641666 Ch. 3624.99 MHz		645332 Ch. 3679.98 MHz	
40 MHz	30	DFT-s	pi/2 BPSK	1	1	13.52	13.51		13.01	0
				1	53	13.37	14.07		13.22	0
				1	104	13.41	13.19		13.16	0
				50	0	13.62	13.93		13.08	0
				50	28	13.61	13.93		13.15	0
				50	56	13.70	13.96		13.14	0
				100	0	13.64	13.94		13.11	0
			QPSK	1	1	13.50	13.83		12.94	0
				1	53	13.58	13.88		13.11	0
				1	104	13.40	13.85		13.11	0
				50	0	13.62	13.97		13.10	0
				50	28	13.42	13.96		13.13	0
				50	56	13.68	13.91		13.21	0
				100	0	13.61	13.95		13.16	0
			16QAM	1	1	13.58	13.89		13.05	0
			64QAM	1	1	13.65	13.92		13.13	0
			256QAM	1	1	13.65	13.98		13.11	0
		CP	QPSK	1	1	13.61	13.93		13.01	0

11.4.7 NR FDD Band n66 Maximum Conducted Power

NR FDD Band n66 Conducted Power_Measured Pmax Antenna A

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							349000 Ch. 1745 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.68		0
				1	108		24.02		0
				1	214		23.91		0
				108	0		23.28		0.5
				108	54		23.93		0
				108	108		23.59		0.5
				216	0		23.42		0.5
			QPSK	1	1		23.71		0
				1	108		23.98		0
				1	214		23.92		0
				108	0		22.85		1
				108	54		23.98		0
				108	108		23.13		1
				216	0		22.94		1
			16QAM	1	1		22.83		1
			64QAM	1	1		21.31		2.5
			256QAM	1	1		19.23		4.5
		CP	QPSK	1	1		22.25		1.5

NR FDD Band n66 Conducted Power_Measured Free(RSI=0) Antenna A

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							349000 Ch. 1745 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		16.95		0
				1	108		17.28		0
				1	214		17.23		0
				108	0		17.09		0
				108	54		17.27		0
				108	108		17.42		0
				216	0		17.18		0
			QPSK	1	1		17.02		0
				1	108		17.37		0
				1	214		17.26		0
				108	0		17.33		0
				108	54		17.24		0
				108	108		17.13		0
				216	0		17.16		0
			16QAM	1	1		16.95		0
			64QAM	1	1		16.99		0
			256QAM	1	1		17.05		0
		CP	QPSK	1	1		17.07		0

NR FDD Band n66 Conducted Power_Measured RCV(RSI=1) Antenna A

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							349000 Ch. 1745 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		19.87		0
				1	108		19.78		0
				1	214		19.84		0
				108	0		19.34		0
				108	54		19.92		0
				108	108		19.37		0
				216	0		19.37		0
			QPSK	1	1		19.93		0
				1	108		19.94		0
				1	214		19.88		0
				108	0		19.87		0
				108	54		19.81		0
				108	108		19.88		0
				216	0		19.83		0
			16QAM	1	1		19.76		0
			64QAM	1	1		19.92		0
			256QAM	1	1		19.85		0
		CP	QPSK	1	1		19.84		0

NR FDD Band n66 Conducted Power_Measured Pmax Antenna F

NR FDD Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							349000 Ch. 1745 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		23.70		0
				1	108		24.17		0
				1	214		24.02		0
				108	0		23.43		0.5
				108	54		24.15		0
				108	108		23.68		0.5
			QPSK	216	0		23.60		0.5
				1	1		24.25		0
				1	108		24.18		0
				1	214		24.05		0
				108	0		22.95		1
				108	54		24.18		0
				108	108		23.24		1
				216	0		23.17		1
			16QAM	1	1		22.95		1
			64QAM	1	1		21.36		2.5
			256QAM	1	1		19.24		4.5
		CP	QPSK	1	1		22.30		1.5

NR FDD Band n66 Conducted Power_Measured Free(RSI=0), RCV(RSI=1) Antenna F

NR Band n66_40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]			MPR [dB]
							349000 Ch. 1745 MHz		
40 MHz	15	DFT-s	pi/2 BPSK	1	1		17.34		0
				1	108		17.76		0
				1	214		17.55		0
				108	0		17.44		0
				108	54		17.69		0
				108	108		17.74		0
			QPSK	216	0		17.60		0
				1	1		17.82		0
				1	108		17.79		0
				1	214		17.67		0
				108	0		17.83		0
				108	54		17.71		0
				108	108		17.72		0
				216	0		17.63		0
			16QAM	1	1		17.36		0
			64QAM	1	1		17.41		0
			256QAM	1	1		17.32		0
		CP	QPSK	1	1		17.72		0

11.4.8 NR FDD Band n70 Maximum Conducted Power

NR FDD Band n70 Conducted Power_Measured Pmax, RCV(RSI=1) Antenna A

NR Band n70_15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							340500 Ch. 1702.5 MHz	
15 MHz	15	DFT-s	pi/2 BPSK	1	1		23.66	0
				1	40		23.66	0
				1	77		23.69	0
				36	0		23.26	0.5
				36	22		23.83	0
				36	43		23.27	0.5
				75	0		23.34	0.5
			QPSK	1	1		23.73	0
				1	40		23.76	0
				1	77		23.80	0
				36	0		22.87	1
				36	22		23.88	0
				36	43		22.83	1
				75	0		22.88	1
			16QAM	1	1		22.73	1
			64QAM	1	1		21.26	2.5
			256QAM	1	1		19.03	4.5
		CP	QPSK	1	1		22.18	1.5

NR FDD Band n70 Conducted Power_Measured Free(RSI=0) Antenna A

NR Band n70_15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							340500 Ch. 1702.5 MHz	
15 MHz	15	DFT-s	pi/2 BPSK	1	1		20.01	0
				1	40		20.04	0
				1	77		20.08	0
				36	0		20.13	0
				36	22		20.15	0
				36	43		20.14	0
				75	0		20.20	0
			QPSK	1	1		20.06	0
				1	40		20.10	0
				1	77		20.14	0
				36	0		20.15	0
				36	22		20.22	0
				36	43		20.15	0
				75	0		20.23	0
			16QAM	1	1		20.07	0
			64QAM	1	1		20.19	0
			256QAM	1	1		19.09	1.5
		CP	QPSK	1	1		20.28	0

11.4.9 NR FDD Band n71 Maximum Conducted Power

NR FDD Band n71 Conducted Power_Measured Pmax, RCV(RSI1), Free(RSI=0) Antenna A

NR Band n71_20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							136100 Ch. 680.5 MHz	
20 MHz	15	DFT-s	pi/2 BPSK	1	1		23.92	0
				1	53		24.40	0
				1	104		24.26	0
				50	0		23.64	0.5
				50	28		24.25	0
				50	56		23.81	0.5
				100	0		23.74	0.5
			QPSK	1	1		23.98	0
				1	53		24.41	0
				1	104		24.27	0
				50	0		23.14	1
				50	28		24.27	0
				50	56		23.37	1
				100	0		23.24	1
			16QAM	1	1		23.10	1
			64QAM	1	1		21.49	2.5
			256QAM	1	1		19.53	4.5
		CP	QPSK	1	1		22.48	1.5

11.4.10 NR FDD Band n77 Maximum Conducted Power

NR FDD Band n77 Conducted Power(PC2)_Measured Pmax Antenna G

NR Band n77_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR [dB]		
						650000 Ch. 3750 MHz				662000 Ch. 3930 MHz			
100 MHz	30	DFT-s	pi/2 BPSK	1	1	26.29				26.59		0	
				1	137	26.78				26.78		0	
				1	271	26.83				26.46		0	
				135	0	26.21				26.29		0.5	
				135	69	26.71				26.86		0	
				135	138	26.37				26.09		0.5	
			QPSK	270	0	26.40				26.35		0.5	
				1	1	26.27				26.72		0	
				1	137	26.49				26.84		0	
				1	271	26.66				26.49		0	
				135	0	25.77				25.88		1	
				135	69	26.59				26.93		0	
				135	138	25.92				25.65		1	
				270	0	25.93				25.88		1	
				16QAM	1	1	25.51				25.73		1
				64QAM	1	1	23.99				24.35		2.5
			256QAM	1	1	21.91				22.22		4.5	
		CP	QPSK	1	1	24.84				25.16		1.5	

NR FDD Band n77 Conducted Power_Measured (Power Class 2)_Free(RSI=0), RCV(RSI=1)

Antenna G

NR Band n77_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]					MPR [dB]	
						650000 Ch. 3750 MHz				662000 Ch. 3930 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1	13.24				13.24		0
				1	137	13.65				13.67		0
				1	271	13.67				13.38		0
				135	0	13.55				13.71		0
				135	69	13.73				13.74		0
				135	138	13.70				13.43		0
			QPSK	270	0	13.73				13.74		0
				1	1	13.27				13.65		0
				1	137	13.68				13.68		0
				1	271	13.70				13.41		0
				135	0	13.59				13.75		0
				135	69	13.77				13.76		0
				135	138	13.71				13.46		0
				270	0	13.76				13.74		0
			16QAM	1	1	13.59				13.68		0
			64QAM	1	1	13.36				13.72		0
			256QAM	1	1	13.35				13.71		0
		CP	QPSK	1	1	13.33				13.67		0

11.4.11 NR FDD Band n77 DoD Maximum Conducted Power

NR FDD Band n77 DoD Conducted Power(PC2)_Measured _Pmax Antenna G

NR Band n77 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
						633334 Ch. 3500.01 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1	26.54		0
				1	137	26.08		0
				1	271	26.50		0
				135	0	25.33		0.5
				135	69	26.18		0
				135	138	25.92		0.5
				270	0	25.65		0.5
			QPSK	1	1	26.04		0
				1	137	26.14		0
				1	271	26.40		0
				135	0	24.92		1
				135	69	26.23		0
				135	138	25.45		1
				270	0	25.20		1
			16QAM	1	1	25.28		1
			64QAM	1	1	23.64		2.5
			256QAM	1	1	21.71		4.5
		CP	QPSK	1	1	24.63		1.5

NR FDD Band n77 DoD Conducted Power(PC2)_Measured _Free(RSI=0), RCV(RSI=1)

Antenna G

NR Band n77 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
						633334 Ch. 3500.01 MHz		
100 MHz	30	DFT-s	pi/2 BPSK	1	1	13.16		0
				1	137	12.95		0
				1	271	13.72		0
				135	0	12.89		0
				135	69	13.21		0
				135	138	13.17		0
				270	0	13.21		0
			QPSK	1	1	13.11		0
				1	137	13.17		0
				1	271	13.18		0
				135	0	13.21		0
				135	69	13.11		0
				135	138	13.27		0
				270	0	13.17		0
			16QAM	1	1	13.06		0
			64QAM	1	1	13.10		0
			256QAM	1	1	13.07		0
		CP	QPSK	1	1	13.02		0

11.4.12 NR FDD Band n78 Maximum Conducted Power

NR FDD Band n78 Conducted Power(PC2)_Measured Pmax Antenna G

NR Band n78_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							650000 Ch. 3750 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1		26.20	0
				1	137		26.72	0
				1	271		26.74	0
				135	0		26.12	0.5
				135	69		26.84	0
				135	138		26.30	0.5
				270	0		26.32	0.5
			QPSK	1	1		26.76	0
				1	137		26.75	0
				1	271		26.75	0
				135	0		25.69	1
				135	69		26.86	0
				135	138		25.84	1
				270	0		25.85	1
			16QAM	1	1		25.50	1
			64QAM	1	1		23.97	2.5
			256QAM	1	1		21.85	4.5
		CP	QPSK	1	1		24.77	1.5

NR FDD Band n78 Conducted Power(PC2)_Measured Free(RSI=0), RCV(RSI=1) Antenna G

NR Band n78_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
							650000 Ch. 3750 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1		13.07	0
				1	137		13.23	0
				1	271		13.24	0
				135	0		13.21	0
				135	69		13.03	0
				135	138		13.28	0
				270	0		13.25	0
			QPSK	1	1		13.11	0
				1	137		13.31	0
				1	271		13.30	0
				135	0		13.28	0
				135	69		13.36	0
				135	138		13.35	0
				270	0		13.10	0
			16QAM	1	1		13.29	0
			64QAM	1	1		13.12	0
			256QAM	1	1		13.24	0
		CP	QPSK	1	1		13.13	0

11.4.13 NR FDD Band n78 DoD Maximum Conducted Power

NR Band n78 Conducted Power(PC2)_ Measured Pmax Antenna G

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
						633334 Ch.	3500.01 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1	26.10		0
				1	137	26.14		0
				1	271	26.56		0
				135	0	25.37		0
				135	69	26.20		0
				135	138	25.92		0
				270	0	25.66		0
			QPSK	1	1	26.09		0
				1	137	26.15		0
				1	271	26.47		0
				135	0	24.91		0
				135	69	26.24		0
				135	138	25.46		0
				270	0	25.21		0
			16QAM	1	1	25.23		0
			64QAM	1	1	23.70		0
			256QAM	1	1	21.66		0
		CP	QPSK	1	1	24.64		0

NR FDD Band n78 DoD Conducted Power(PC2)_Measured RCV(RSI1) ,Free(RSI=0) Antenna G NR Band n78 DoD_100 MHz Bandwidth Conducted Power-Power Class 2

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max.Average Power [dBm]		MPR [dB]
						633334 Ch.	3500.01 MHz	
100 MHz	30	DFT-s	pi/2 BPSK	1	1	13.08		0
				1	137	13.25		0
				1	271	13.26		0
				135	0	13.20		0
				135	69	13.05		0
				135	138	13.34		0
				270	0	13.25		0
			QPSK	1	1	13.11		0
				1	137	13.26		0
				1	271	13.32		0
				135	0	13.26		0
				135	69	13.29		0
				135	138	13.38		0
				270	0	13.11		0
			16QAM	1	1	13.24		0
			64QAM	1	1	13.05		0
			256QAM	1	1	13.22		0
		CP	QPSK	1	1	13.19		0

11.4.14 NR Band SRS Conducted Power

[NR TDD Band n48 SRS Conducted Power]

NR TDD Band n48_ 40 MHz Bandwidth Conducted Power_ Antenna I/ SUB5, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]			MPR [dB]
				638000Ch.	641666Ch.	645332Ch.	
				3 570 MHz	3 624.99 MHz	3 679.98 MHz	
Measured P_{max}	40 MHz	30	DFT-s QPSK	16.02	16.35	16.24	0
RSI = 0,1	40 MHz	30	DFT-s QPSK	8.62	9.26	9.19	0

NR TDD Band n48_ 40 MHz Bandwidth Conducted Power_ Antenna F/SUB2, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]			MPR [dB]
				638000Ch.	641666Ch.	645332Ch.	
				3 570 MHz	3 624.99 MHz	3 679.98 MHz	
Measured P_{max}	40 MHz	30	DFT-s QPSK	20.89	21.07	20.55	0
RSI = 0,1	40 MHz	30	DFT-s QPSK	13.70	13.89	13.45	0

NR TDD Band n48_ 40 MHz Bandwidth Conducted Power_ Antenna H/ SUB4, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]			MPR [dB]
				638000Ch.	641666Ch.	645332Ch.	
				3 570 MHz	3 624.99 MHz	3 679.98 MHz	
Measured P_{max}	40 MHz	30	DFT-s QPSK	16.51	16.53	15.81	0
RSI = 0,1	40 MHz	30	DFT-s QPSK	9.42	9.44	8.73	0

[NR TDD Band n77(Power Class 2) SRS Conducted Power]

NR TDD Band n77(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna I/ SUB5, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]		MPR [dB]
				650000Ch.	662000Ch.	
				3 750 MHz	3 930 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	22.31	22.21	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.97	9.96	0

NR TDD Band n77(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna F/SUB2, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]		MPR [dB]
				650000Ch.	662000Ch.	
				3 750 MHz	3 930 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	26.14	25.78	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	13.99	13.62	0

NR TDD Band n77(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna H/ SUB4, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]		MPR [dB]
				650000Ch.	662000Ch.	
				3 750 MHz	3 930 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	21.25	21.18	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.14	9.07	0

[NR TDD Band n77_DoD(Power Class 2) SRS Conducted Power]

NR TDD Band n77_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna I/ SUB5, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				633334Ch.	[dB]
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	20.02	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	8.11	0

NR TDD Band n77_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna F/SUB2, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				633334Ch.	[dB]
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	25.52	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	13.36	0

NR TDD Band n77_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna H/ SUB4, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR
				633334Ch.	[dB]
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	21.09	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.03	0

[NR TDD Band n78(Power Class 2) SRS Conducted Power]

NR TDD Band n78(Power Class 2)_100 MHz Bandwidth Conducted Power_ Antenna I/ SUB5, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				650000Ch.	
				3 750 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	22.24	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.91	0

NR TDD Band n78(Power Class 2)_100 MHz Bandwidth Conducted Power_ Antenna F/SUB2, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				650000Ch.	
				3 750 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	26.18	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	13.81	0

NR TDD Band n78(Power Class 2)_100 MHz Bandwidth Conducted Power_ Antenna H/ SUB4, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				650000Ch.	
				3 750 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	21.16	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.09	0

[NR TDD Band n78_DoD(Power Class 2) SRS Conducted Power]

NR TDD Band n78_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna I/SUB5, SRS#2

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				633334Ch.	
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	20.01	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	8.10	0

NR TDD Band n78_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna F/SUB2, SRS#3

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				633334Ch.	
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	25.45	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	13.31	0

NR TDD Band n78_DoD(Power Class 2)_ 100 MHz Bandwidth Conducted Power_ Antenna H/SUB4, SRS#4

	Bandwidth	SCS(kHz)	Modulation	Max. Average Power [dBm]	MPR [dB]
				633334Ch.	
				3 500.01 MHz	
Measured P_{max}	100 MHz	30	DFT-s QPSK	21.14	0
RSI = 0,1	100 MHz	30	DFT-s QPSK	9.01	0

11.5 WIFI Conducted Power measurement method

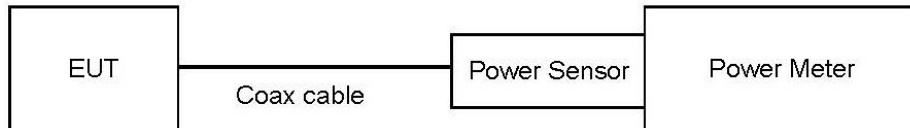
Un-Licensed Bands (DTS Band)

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

Test Procedure

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

Test setup



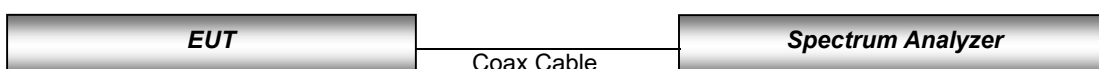
Un-Licensed Bands (NII Band)

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

Test Procedure

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

Test setup



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

Mode	Frequency [MHz]	Channel	Plimit (Head)
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]
			WIFI 1
802.11b	2 412	1	18.11
	2 437	6	17.98
	2 462	11	17.95

Mode	Frequency [MHz]	Channel	Plimit (Body)
			IEEE 802.11 (2.4 GHz) Average RF Conducted Power [dBm]
			WIFI 1
802.11b	2 412	1	15.84
	2 437	6	15.76
	2 462	11	15.87

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

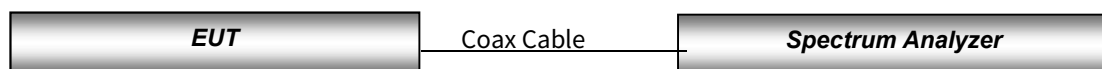
Frequency [MHz]	Channel	Plimit (Head)
		IEEE 802.11 a (20 MHz BW) Conducted Power [dBm]
		Ant.1
36	5 180	16.62
40	5 200	16.61
44	5 220	16.49
48	5 240	16.46
52	5 260	16.47
56	5 280	16.95
60	5 300	16.24
64	5 320	14.20
100	5 500	13.11
120	5 600	16.68
124	5 620	16.84
144	5 720	16.50
149	5 745	16.77
157	5 785	16.41
165	5 825	16.54
169	5 845	15.61
173	5 865	15.75
177	5 885	15.67

Frequency [MHz]	Channel	Plimit (Body)
		IEEE 802.11 ac (80 MHz BW) Conducted Power [dBm]
		Ant.1
42	5 210	9.24
58	5 290	9.60
106	5 530	6.54
122	5 610	8.98
138	5 690	8.60
155	5 775	9.84
171	5 855	8.75

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

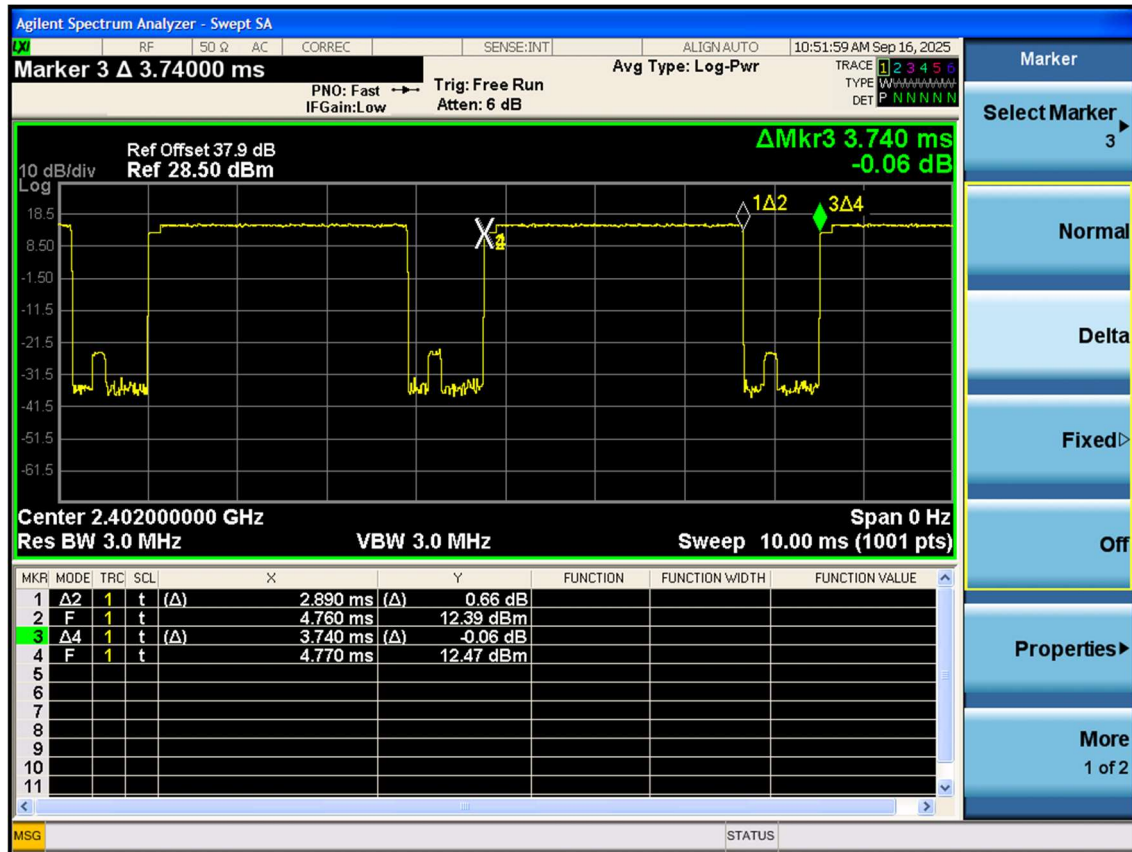
11.6 Bluetooth Maximum Conducted Power

Bluetooth SISO Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
		Ant.1
DH5	0	12.73
	39	12.31
	78	12.44
2-DH5	0	12.62
	39	12.08
	78	12.03
3-DH5	0	12.69
	39	12.17
	78	12.13

Mode	Channel	Max. Average Conducted Power [dBm]
		BT Ant.1
LE 125K (255)	37	11.97
	17	11.54
	39	11.84

Bluetooth DH 5 Mode



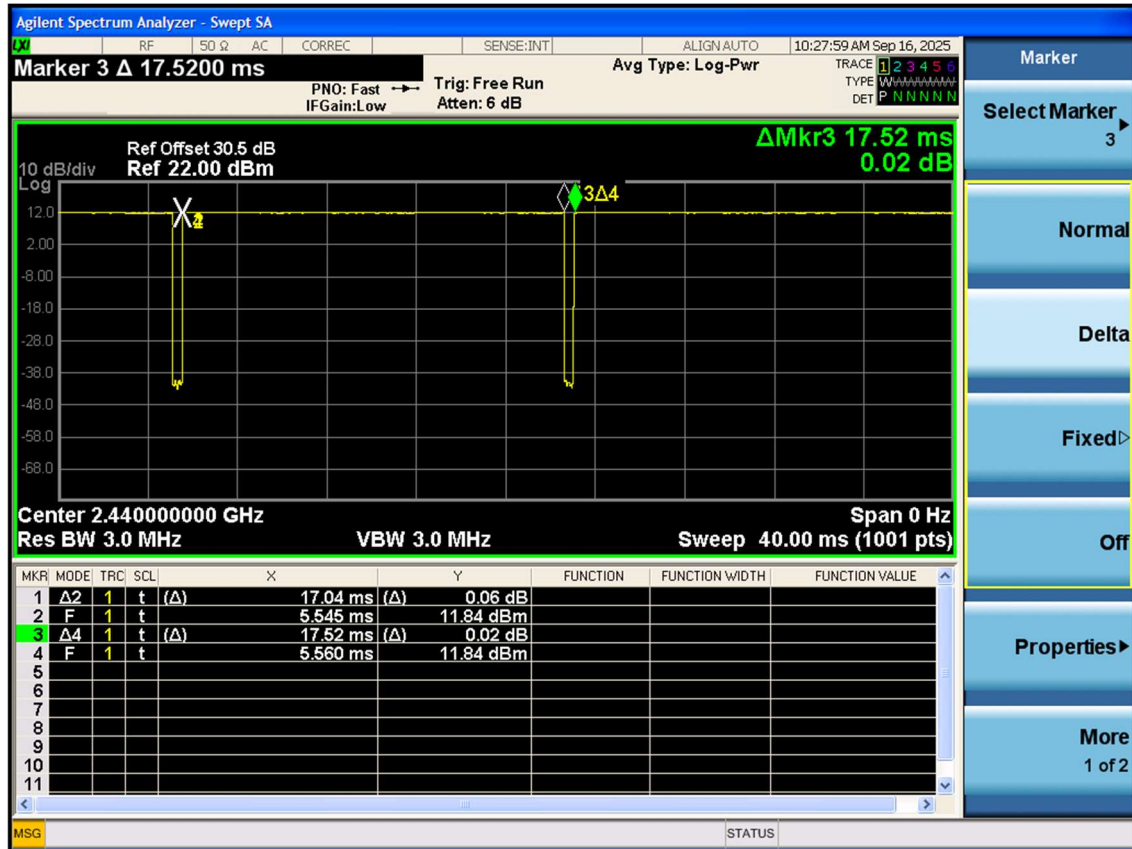
Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (2.890 / 3.740) = 0.773 \text{ (DH5)}$$

BT DH5 Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 78.0 % In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results. Duty cycle of DH5 measured by DUT was 77.3%, and the duty cycle was compensated by applying test error tolerance 1%. For more information on BT, please refer to the technical description document.

Bluetooth LE 125K Mode



Duty Cycle

$$= (\text{BT-On time} / \text{BT-Full time}) = (17.04 / 17.52) = 0.973 \text{ (125K)}$$

BT LE 125K(255) Maximum Duty Factor:

The theoretical maximum duty cycle defined by chipset manufacturer is 98 %. In the ideal theory Duty Cycle, the test error tolerance [1%] of the test equipment was considered and applied to the measurement results. Duty cycle of DH5 measured by DUT was 97.3%, and the duty cycle was compensated by applying test error tolerance 1%. For more information on BT , please refer to the technical description document.

12. System Verification

12.1 Tissue Verification

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

◆ GSM/ UMTS/ LTE/ WLAN/ NFC Band

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
10/23/25	21.7	13H	12	0.737	54.646	0.750	55.000	- 1.72	- 0.64
			13	0.742	54.045	0.750	55.000	- 1.08	- 1.74
			14	0.748	54.138	0.750	55.000	- 0.23	- 1.57
09/03/25	23.0	750H	705	0.870	43.137	0.889	42.174	- 2.11	+ 2.28
			710	0.870	43.205	0.890	42.148	- 2.24	+ 2.51
			750	0.894	42.991	0.893	41.940	+ 0.07	+ 2.51
09/04/25	22.2	750H	750	0.889	42.937	0.893	41.940	- 0.47	+ 2.38
			785	0.903	42.932	0.896	41.758	+ 0.78	+ 2.81
09/05/25	22.8	750H	750	0.886	43.057	0.893	41.940	- 0.83	+ 2.66
			785	0.903	42.767	0.896	41.758	+ 0.75	+ 2.42
09/08/25	23.2	750H	705	0.873	43.041	0.889	42.174	- 1.78	+ 2.06
			710	0.871	43.019	0.890	42.148	- 2.12	+ 2.07
			750	0.890	43.179	0.893	41.940	- 0.30	+ 2.95
09/01/25	22.9	835H	820	0.929	42.770	0.899	41.577	+ 3.32	+ 2.87
			835	0.933	42.543	0.900	41.500	+ 3.71	+ 2.51
			850	0.936	42.623	0.916	41.500	+ 2.23	+ 2.71
09/02/25	23.0	835H	820	0.931	42.750	0.899	41.577	+ 3.56	+ 2.82
			835	0.937	42.730	0.900	41.500	+ 4.12	+ 2.96
			850	0.938	42.469	0.916	41.500	+ 2.44	+ 2.34
09/09/25	21.6	835H	820	0.928	42.614	0.899	41.577	+ 3.26	+ 2.49
			835	0.932	42.481	0.900	41.500	+ 3.53	+ 2.36
			850	0.938	42.561	0.916	41.500	+ 2.36	+ 2.56
09/09/25	22.1	1800H	1 710	1.312	39.864	1.348	40.144	- 2.66	- 0.70
			1 750	1.340	40.046	1.371	40.080	- 2.27	- 0.09
			1 800	1.378	40.138	1.400	40.000	- 1.57	+ 0.34
09/15/25	22.0	1800H	1 710	1.308	40.168	1.348	40.144	- 2.96	+ 0.06
			1 750	1.340	40.039	1.371	40.080	- 2.26	- 0.10
			1 800	1.376	40.027	1.400	40.000	- 1.72	+ 0.07
09/11/25	22.0	1800H	1 710	1.317	40.044	1.348	40.144	- 2.32	- 0.25
			1 750	1.338	40.109	1.371	40.080	- 2.41	+ 0.07
			1 800	1.376	40.209	1.400	40.000	- 1.72	+ 0.52

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
09/05/25	21.7	1900H	1 850	1.413	39.868	1.400	40.000	+ 0.92	- 0.33
			1 900	1.446	39.566	1.400	40.000	+ 3.30	- 1.08
			1 910	1.440	39.557	1.400	40.000	+ 2.84	- 1.11
09/08/25	22.1	1900H	1 850	1.416	39.928	1.400	40.000	+ 1.18	- 0.18
			1 900	1.446	39.743	1.400	40.000	+ 3.27	- 0.64
			1 910	1.442	39.833	1.400	40.000	+ 3.03	- 0.42
10/01/25	21.9	1900H	1 850	1.407	39.877	1.400	40.000	+ 0.51	- 0.31
			1 900	1.444	39.839	1.400	40.000	+ 3.15	- 0.40
			1 910	1.440	39.881	1.400	40.000	+ 2.88	- 0.30
09/25/25	22.4	1900H	1 850	1.410	39.724	1.400	40.000	+ 0.73	- 0.69
			1 900	1.445	39.786	1.400	40.000	+ 3.19	- 0.53
			1 910	1.447	39.623	1.400	40.000	+ 3.34	- 0.94
09/05/25	22.8	2300H	2 300	1.726	39.339	1.667	39.470	+ 3.55	- 0.33
			2 310	1.726	39.093	1.676	39.452	+ 2.96	- 0.91
09/15/25	22.6	2450H	2 400	1.800	39.118	1.756	39.290	+ 2.48	- 0.44
			2 450	1.830	39.108	1.800	39.200	+ 1.67	- 0.23
			2 500	1.876	39.173	1.855	39.140	+ 1.16	+ 0.08
09/25/25	22.3	2450H	2 400	1.787	39.004	1.756	39.290	+ 1.74	- 0.73
			2 450	1.828	39.353	1.800	39.200	+ 1.56	+ 0.39
			2 500	1.872	39.250	1.855	39.140	+ 0.90	+ 0.28
09/26/25	22.4	2450H	2 400	1.791	39.053	1.756	39.290	+ 1.98	- 0.66
			2 450	1.840	39.029	1.800	39.200	+ 2.23	+ 0.30
			2 500	1.870	39.317	1.855	39.140	+ 0.84	+ 0.53
09/04/25	22.2	2600H	2 500	1.873	39.346	1.855	39.140	+ 0.94	+ 0.53
			2 600	2.010	39.249	1.964	39.010	+ 2.33	+ 0.61
			2 690	2.120	38.326	2.062	38.894	+ 2.81	- 1.46
09/08/25	23.2	2600H	2 500	1.883	39.182	1.855	39.140	+ 1.51	+ 0.11
			2 600	1.998	39.158	1.964	39.010	+ 1.75	+ 0.38
			2 690	2.117	38.173	2.062	38.894	+ 2.64	- 1.86
09/11/25	21.5	3500H-3700H	3 500	2.941	38.537	2.913	37.930	+ 0.96	+ 1.60
			3 550	3.001	38.248	2.964	37.870	+ 1.26	+ 1.00
			3 650	3.084	38.140	3.066	37.760	+ 0.58	+ 1.01
			3 700	3.132	37.995	3.118	37.770	+ 0.45	+ 0.59
10/15/25	21.9	5180H-5320H	5 180	4.682	35.141	4.635	36.010	+ 1.02	- 2.41
			5 250	4.785	34.986	4.706	35.930	+ 1.68	- 2.63
			5 280	4.827	35.057	4.737	35.894	+ 1.90	- 2.33
			5 320	4.855	34.948	4.778	35.846	+ 1.61	- 2.51
10/16/25	22.0	5500H-5600H	5 500	5.017	34.859	4.963	35.640	+ 1.08	- 2.19
			5 600	5.115	34.496	5.065	35.530	+ 0.99	- 2.91
			5 750	5.336	34.612	5.219	35.360	+ 2.25	- 2.12

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
09/24/25	22.4	5750H-5825H	5 750	5.336	34.678	5.219	35.360	+ 2.24	- 1.93
			5 800	5.295	34.657	5.270	35.300	+ 0.47	- 1.82
			5 825	5.247	34.477	5.296	35.270	- 0.92	- 2.25
09/25/25	20.4	5800H-5885H	5 800	5.285	34.678	5.270	35.300	+ 0.29	- 1.76
			5 835	5.234	34.523	5.306	35.258	- 1.36	- 2.09
			5 845	5.231	34.444	5.316	35.246	- 1.60	- 2.27
			5 855	5.228	34.398	5.326	35.235	- 1.85	- 2.38
			5 865	5.211	34.394	5.337	35.225	- 2.37	- 2.36
			5 875	5.216	34.307	5.347	35.215	- 2.45	- 2.58
			5 885	5.232	34.155	5.357	35.205	- 2.33	- 2.98

◆ 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
09/11/25	22.0	750H	705	0.873	43.053	0.889	42.174	- 1.78	+ 2.09
			710	0.876	42.942	0.890	42.148	- 1.53	+ 1.88
			750	0.888	42.983	0.893	41.940	- 0.59	+ 2.49
09/10/25	22.4	835H	820	0.930	42.619	0.899	41.577	+ 3.39	+ 2.50
			835	0.935	42.535	0.900	41.500	+ 3.88	+ 2.49
			850	0.935	42.423	0.916	41.500	+ 2.09	+ 2.22
09/18/25	22.1	1640H	1 640	1.318	41.596	1.307	40.255	+ 0.85	+ 3.33
			1 690	1.381	41.024	1.336	40.176	+ 3.40	+ 2.11
			1 700	1.397	40.539	1.342	40.160	+ 4.13	+ 0.94
09/17/25	22.2	1800H	1 710	1.311	40.133	1.348	40.144	- 2.71	- 0.03
			1 750	1.340	40.130	1.371	40.080	- 2.29	+ 0.12
			1 800	1.381	39.905	1.400	40.000	- 1.37	- 0.24
09/19/25	22.4	1800H	1 710	1.308	39.843	1.348	40.144	- 2.94	- 0.75
			1 750	1.330	39.953	1.371	40.080	- 2.96	- 0.32
			1 800	1.379	40.048	1.400	40.000	- 1.47	+ 0.12
10/02/25	21.8	1900H	1 850	1.410	39.905	1.400	40.000	+ 0.72	- 0.24
			1 900	1.443	39.566	1.400	40.000	+ 3.06	- 1.08
			1 910	1.441	39.732	1.400	40.000	+ 2.90	- 0.67
09/22/25	22.2	1900H	1 850	1.416	40.009	1.400	40.000	+ 1.17	+ 0.02
			1 900	1.439	39.570	1.400	40.000	+ 2.76	- 1.08
			1 910	1.443	39.777	1.400	40.000	+ 3.10	- 0.56
09/12/25	22.2	2300H	2 300	1.714	39.145	1.667	39.470	+ 2.81	- 0.82
			2 310	1.719	39.283	1.676	39.452	+ 2.58	- 0.43
09/11/25	22.0	2 600H	2 500	1.879	39.364	1.855	39.140	+ 1.29	+ 0.57
			2 600	1.996	38.997	1.964	39.010	+ 1.64	- 0.03
			2 690	2.116	38.475	2.062	38.894	+ 2.63	- 1.08

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	dev σ %	dev ϵ %
09/17/25	22.2	3500H-3700H	3 500	2.952	38.283	2.913	37.930	+ 1.35	+ 0.93
			3 550	2.999	38.317	2.964	37.870	+ 1.17	+ 1.18
			3 650	3.093	38.151	3.066	37.760	+ 0.87	+ 1.04
			3 700	3.147	38.163	3.118	37.770	+ 0.94	+ 1.04
09/22/25	21.8	3500H-3700H	3 500	2.953	38.485	2.913	37.930	+ 1.37	+ 1.46
			3 550	3.001	38.238	2.964	37.870	+ 1.24	+ 0.97
			3 650	3.101	38.573	3.066	37.760	+ 1.15	+ 2.15
			3 700	3.140	37.942	3.118	37.770	+ 0.72	+ 0.46
09/18/25	21.3	3500H	3 400	2.854	38.474	2.810	38.040	+ 1.55	+ 1.14
			3 500	2.940	38.506	2.913	37.930	+ 0.93	+ 1.52
			3 550	3.001	38.396	2.964	37.870	+ 1.23	+ 1.39
09/18/25	21.3	3700H-3970	3 700	3.150	37.993	3.118	37.700	+ 1.02	+ 0.78
			3 750	3.181	38.122	3.169	37.640	+ 0.39	+ 1.28
			3 800	3.234	37.952	3.220	37.590	+ 0.44	+ 0.96
			3 900	3.335	37.810	3.233	37.470	+ 3.15	+ 0.91
			3 970	3.412	37.737	3.394	37.390	+ 0.52	+ 0.93
09/23/25	21.5	3500H	3 400	2.842	38.573	2.810	38.040	+ 1.13	+ 1.40
			3 500	2.958	38.555	2.913	37.930	+ 1.55	+ 1.65
			3 550	3.013	38.436	2.964	37.870	+ 1.64	+ 1.49
09/23/25	21.5	3700H-3970	3 700	3.142	38.298	3.118	37.700	+ 0.76	+ 1.59
			3 750	3.185	38.227	3.169	37.640	+ 0.50	+ 1.56
			3 800	3.234	37.801	3.220	37.590	+ 0.45	+ 0.56
			3 900	3.335	37.692	3.233	37.470	+ 3.16	+ 0.59
			3 970	3.416	37.878	3.394	37.390	+ 0.65	+ 1.30

12.2 System Verification

◆ GSM/ UMTS/ LTE Band

Input Power: 50 mW

Freq. [MHz]	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp. [°C]	Liquid Temp. [°C]	1 W Target SAR _{1g} (Speag) [W/kg]	50 mW Measured SAR _{1g} [W/kg]	1 W Normalized SAR _{1g} [W/kg]	Dev. [%]	Limit [%]
750	09/03/25	7702	1014	Head	23.1	23.0	8.80	0.439	8.78	-0.23	± 10
750	09/04/25	7702	1014	Head	22.3	22.2	8.80	0.438	8.76	-0.45	± 10
750	09/05/25	7702	1014	Head	22.9	22.8	8.80	0.436	8.72	-0.91	± 10
750	09/08/25	7702	1014	Head	23.3	23.2	8.80	0.440	8.80	+0.00	± 10
835	09/01/25	7702	4d165	Head	23.0	22.9	9.32	0.502	10.04	+7.73	± 10
835	09/02/25	7702	4d165	Head	23.1	23.0	9.32	0.503	10.06	+7.93	± 10
835	09/09/25	7702	4d165	Head	21.7	21.6	9.32	0.501	10.02	+7.51	± 10
1800	09/09/25	7370	2d015	Head	22.2	22.1	38.10	1.87	37.40	-1.84	± 10
1800	09/15/25	7370	2d015	Head	22.1	22.0	38.10	1.90	38.00	-0.26	± 10
1800	09/11/25	7370	2d015	Head	22.1	22.0	38.10	1.89	37.80	-0.79	± 10
1900	09/05/25	7370	5d061	Head	21.8	21.7	38.80	2.05	41.00	+5.67	± 10
1900	09/08/25	7370	5d061	Head	22.2	22.1	38.80	2.05	41.00	+5.67	± 10
1900	10/01/25	7370	5d061	Head	22.0	21.9	38.80	2.04	40.80	+5.15	± 10
1900	09/25/25	7370	5d061	Head	22.5	22.4	38.80	2.04	40.80	+5.15	± 10
2300	09/05/25	3797	1010	Head	22.9	22.8	48.60	2.37	47.40	-2.47	± 10
2600	09/04/25	3797	1043	Head	22.3	22.2	56.90	2.67	53.40	-6.15	± 10
2600	09/08/25	3797	1043	Head	23.3	23.2	56.90	2.65	53.00	-6.03	± 10
3500	09/11/25	7679	1040	Head	21.6	21.5	65.20	3.20	64.00	-1.84	± 10
3700	09/11/25	7679	1105	Head	21.6	21.5	69.30	3.58	71.60	+3.32	± 10

◆ 5G NR SUB 6 Band

Input Power: 50 mW

Freq. [MHz]	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp. [°C]	Liquid Temp. [°C]	1 W Target SAR _{1g} (Speag) [W/kg]	50 mW Measured SAR _{1g} [W/kg]	1 W Normalized SAR _{1g} [W/kg]	Dev. [%]	Limit [%]
750	09/11/25	7702	1014	Head	22.1	22.0	8.80	0.438	8.76	-0.45	± 10
835	09/10/25	7702	4d165	Head	22.5	22.4	9.32	0.502	10.04	+7.73	± 10
1 640	09/18/25	7370	345	Head	22.2	22.1	33.80	1.740	34.80	+2.96	± 10
1 800	09/17/25	7370	2d015	Head	22.3	22.2	38.1	1.91	38.20	+0.26	± 10
1 800	09/19/25	7370	2d015	Head	22.5	22.4	38.1	1.90	38.00	-0.26	± 10
1 900	10/02/25	7370	5d061	Head	21.9	21.8	38.80	2.05	41.00	+5.67	± 10
1 900	09/22/25	7370	5d061	Head	22.3	22.2	38.80	2.05	41.00	+5.67	± 10
2 300	09/12/25	3797	1010	Head	22.3	22.2	48.60	2.42	48.40	-0.41	± 10
2 600	09/11/25	3797	1043	Head	22.1	22.0	56.90	2.64	52.80	-7.21	± 10
3 500	09/17/25	7679	1040	Head	22.3	22.2	65.20	3.33	66.60	+2.15	± 10
3 500	09/18/25	7679	1040	Head	21.4	21.3	65.20	3.33	66.60	+2.15	± 10
3 500	09/22/25	7679	1040	Head	21.9	21.8	65.20	3.20	64.00	-1.84	± 10
3 500	09/23/25	7679	1040	Head	21.6	21.5	65.20	3.18	63.60	-2.45	± 10
3 700	09/17/25	7679	1066	Head	22.3	22.2	67.70	3.60	72.00	+6.35	± 10
3 700	09/22/25	7679	1066	Head	21.9	21.8	67.70	3.60	72.00	+6.35	± 10
3 700	09/18/25	7679	1066	Head	21.4	21.3	67.70	3.61	72.20	+6.65	± 10
3 700	09/23/25	7679	1066	Head	21.6	21.5	67.70	3.60	72.00	+6.35	± 10
3 900	09/18/25	7679	1019	Head	21.4	21.3	70.30	3.42	68.40	-2.70	± 10
3 900	09/23/25	7679	1019	Head	21.6	21.5	70.30	3.44	68.80	-2.13	± 10

◆ WLAN/BT

Freq. [MHz]	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp. [°C]	Liquid Temp. [°C]	1 W Target SAR _{1g} (Speag) [W/kg]	50 mW Measured SAR _{1g} [W/kg]	1 W Normalized SAR _{1g} [W/kg]	Dev. [%]	Limit [%]
2 450	09/15/25	3797	1049	Head	22.7	22.6	52.60	2.43	48.60	-7.60	± 10
2 450	09/25/25	3797	1049	Head	22.4	22.3	52.60	2.42	48.40	-7.98	± 10
2 450	09/26/25	3797	1049	Head	22.5	22.4	52.60	2.49	49.80	-5.32	± 10
5 250	10/15/25	7680	1107	Head	21.9	21.8	80.20	4.37	87.40	+8.98	± 10
5 600	10/16/25	7680	1107	Head	22.0	21.9	82.10	4.39	87.80	+6.94	± 10
5 750	09/24/25	7680	1107	Head	22.5	22.4	79.90	3.88	77.60	-2.88	± 10
5 800	09/25/25	7680	1107	Head	20.5	20.4	79.30	3.60	72.00	-9.21	± 10

◆ System Verification Results – Extremity SAR

Input Power: 50 mW

Freq. [MHz]	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp. [°C]	Liquid Temp. [°C]	1 W Target SAR _{10g} (SPEAG) [W/kg]	50 mW Measured SAR _{10g} [W/kg]	1 W Normalized SAR _{10g} [W/kg]	Deviation [%]	Limit [%]
13	10/23/25	3076	1016	Head	21.7	21.6	0.347	0.017	0.340	-2.02	± 10

12.3 SAR Test System Verification Procedure

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

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

Note;

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

13. SAR Test Data Summary

13.1 SAR Measurement Results

13.1.1 Head SAR Measurement Results

GSM850 Head SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GSM Voice	A	33.0	31.45	-0.12	Left Cheek	1:8.3	0.106	1.429	0.151	-
836.6	190	GSM Voice	A	33.0	31.45	-0.07	Left Tilt	1:8.3	0.073	1.429	0.104	-
836.6	190	GSM Voice	A	33.0	31.45	-0.18	Right Cheek	1:8.3	0.127	1.429	0.181	-
836.6	190	GSM Voice	A	33.0	31.45	-0.03	Right Tilt	1:8.3	0.076	1.429	0.109	-
836.6	190	GPRS 4Tx	A	27.0	25.43	0.16	Left Cheek	1:2.08	0.116	1.435	0.166	-
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.19	Left Tilt	1:2.08	0.070	1.435	0.100	-
836.6	190	GPRS 4Tx	A	27.0	25.43	0.07	Right Cheek	1:2.08	0.147	1.435	0.211	A1
836.6	190	GPRS 4Tx	A	27.0	25.43	0.10	Right Tilt	1:2.08	0.088	1.435	0.126	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

GSM1900 Head SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GSM Voice	A	29.5	27.83	0.15	Left Cheek	1:8.3	0.078	1.469	0.115	A2
1 880	661	GSM Voice	A	29.5	27.83	-0.15	Left Tilt	1:8.3	0.061	1.469	0.090	-
1 880	661	GSM Voice	A	29.5	27.83	0.11	Right Cheek	1:8.3	0.068	1.469	0.100	-
1 880	661	GSM Voice	A	29.5	27.83	-0.12	Right Tilt	1:8.3	0.065	1.469	0.095	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.10	Left Cheek	1:2.08	0.077	1.164	0.090	-
1 880	661	GPRS 4Tx	A	23.5	22.84	0.14	Left Tilt	1:2.08	0.062	1.164	0.072	-
1 880	661	GPRS 4Tx	A	23.5	22.84	0.14	Right Cheek	1:2.08	0.067	1.164	0.078	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.17	Right Tilt	1:2.08	0.064	1.164	0.074	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

UMTS Band 5 Head SAR											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	24.5	23.15	0.13	Left Cheek	0.130	1.365	0.177	-
836.6	4183	RMC	A	24.5	23.15	0.13	Left Tilt	0.086	1.365	0.117	-
836.6	4183	RMC	A	24.5	23.15	-0.14	Right Cheek	0.136	1.365	0.186	A3
836.6	4183	RMC	A	24.5	23.15	-0.14	Right Tilt	0.067	1.365	0.091	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram				

UMTS Band 4 Head SAR											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	A	20.0	18.71	0.11	Left Cheek	0.057	1.346	0.077	A4
1 732.4	1412	RMC	A	20.0	18.71	-0.13	Left Tilt	0.024	1.346	0.032	-
1 732.4	1412	RMC	A	20.0	18.71	-0.13	Right Cheek	0.052	1.346	0.070	-
1 732.4	1412	RMC	A	20.0	18.71	0.17	Right Tilt	0.037	1.346	0.050	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram				

UMTS Band 2 Head SAR											
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	A	20.0	18.91	-0.18	Left Cheek	0.087	1.285	0.112	A5
1 880	9400	RMC	A	20.0	18.91	-0.15	Left Tilt	0.069	1.285	0.089	-
1 880	9400	RMC	A	20.0	18.91	-0.12	Right Cheek	0.074	1.285	0.095	-
1 880	9400	RMC	A	20.0	18.91	-0.17	Right Tilt	0.055	1.285	0.071	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram				

LTE FDD Band 2 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	18900	QPSK	F	20	19.0	17.22	-0.15	Left Cheek	0	1	0	1:1	0.149	1.507	0.225	-
1 880	18900	QPSK	F	20	19.0	17.21	-0.10	Left Cheek	0	50	0	1:1	0.172	1.510	0.260	-
1 880	18900	QPSK	F	20	19.0	17.22	0.13	Left Tilt	0	1	0	1:1	0.104	1.507	0.157	-
1 880	18900	QPSK	F	20	19.0	17.21	-0.14	Left Tilt	0	50	0	1:1	0.118	1.510	0.178	-
1 880	18900	QPSK	F	20	19.0	17.22	0.17	Right Cheek	0	1	0	1:1	0.317	1.507	0.478	-
1 880	18900	QPSK	F	20	19.0	17.21	0.18	Right Cheek	0	50	0	1:1	0.330	1.510	0.498	A6
1 880	18900	QPSK	F	20	19.0	17.22	-0.19	Right Tilt	0	1	0	1:1	0.180	1.507	0.271	-
1 880	18900	QPSK	F	20	19.0	17.21	0.07	Right Tilt	0	50	0	1:1	0.191	1.510	0.288	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 7 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 510	20850	QPSK	A	20	24.0	23.04	-0.14	Left Cheek	0	1	0	1:1	0.351	1.247	0.438	A7
2 510	20850	QPSK	A	20	23.0	22.17	0.12	Left Cheek	1	50	0	1:1	0.279	1.211	0.338	-
2 510	20850	QPSK	A	20	24.0	23.04	0.03	Left Tilt	0	1	0	1:1	0.123	1.247	0.153	-
2 510	20850	QPSK	A	20	23.0	22.17	0.12	Left Tilt	1	50	0	1:1	0.097	1.211	0.117	-
2 510	20850	QPSK	A	20	24.0	23.04	0.11	Right Cheek	0	1	0	1:1	0.165	1.247	0.206	-
2 510	20850	QPSK	A	20	23.0	22.17	-0.17	Right Cheek	1	50	0	1:1	0.129	1.211	0.156	-
2 510	20850	QPSK	A	20	24.0	23.04	0.11	Right Tilt	0	1	0	1:1	0.160	1.247	0.200	-
2 510	20850	QPSK	A	20	23.0	22.17	0.10	Right Tilt	1	50	0	1:1	0.127	1.211	0.154	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 12 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	25.5	24.68	0.13	Left Cheek	0	1	0	1:1	0.189	1.208	0.228	-
707.5	23095	QPSK	A	10	24.5	23.76	0.18	Left Cheek	1	25	0	1:1	0.148	1.186	0.176	-
707.5	23095	QPSK	A	10	25.5	24.68	-0.13	Left Tilt	0	1	0	1:1	0.091	1.208	0.110	-
707.5	23095	QPSK	A	10	24.5	23.76	0.09	Left Tilt	1	25	0	1:1	0.073	1.186	0.087	-
707.5	23095	QPSK	A	10	25.5	24.68	-0.03	Right Cheek	0	1	0	1:1	0.206	1.208	0.249	A8
707.5	23095	QPSK	A	10	24.5	23.76	0.08	Right Cheek	1	25	0	1:1	0.161	1.186	0.191	-
707.5	23095	QPSK	A	10	25.5	24.68	0.17	Right Tilt	0	1	0	1:1	0.084	1.208	0.101	-
707.5	23095	QPSK	A	10	24.5	23.76	0.12	Right Tilt	1	25	0	1:1	0.066	1.186	0.078	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 13 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	25.0	23.80	0.12	Left Cheek	0	1	0	1:1	0.152	1.318	0.200	A9
782	23230	QPSK	A	10	24.0	22.99	0.16	Left Cheek	1	25	0	1:1	0.120	1.262	0.151	-
782	23230	QPSK	A	10	25.0	23.80	0.06	Left Tilt	0	1	0	1:1	0.087	1.318	0.115	-
782	23230	QPSK	A	10	24.0	22.99	-0.02	Left Tilt	1	25	0	1:1	0.076	1.262	0.096	-
782	23230	QPSK	A	10	25.0	23.80	0.10	Right Cheek	0	1	0	1:1	0.150	1.318	0.198	-
782	23230	QPSK	A	10	24.0	22.99	0.18	Right Cheek	1	25	0	1:1	0.150	1.262	0.189	-
782	23230	QPSK	A	10	25.0	23.80	-0.14	Right Tilt	0	1	0	1:1	0.083	1.318	0.110	-
782	23230	QPSK	A	10	24.0	22.99	0.11	Right Tilt	1	25	0	1:1	0.069	1.262	0.087	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 14 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
793	23330	QPSK	A	10	25.0	24.02	0.15	Left Cheek	0	1	0	1:1	0.177	1.253	0.222	-
793	23330	QPSK	A	10	24.0	23.22	0.12	Left Cheek	1	25	0	1:1	0.144	1.197	0.172	-
793	23330	QPSK	A	10	25.0	24.02	0.04	Left Tilt	0	1	0	1:1	0.100	1.253	0.125	-
793	23330	QPSK	A	10	24.0	23.22	0.16	Left Tilt	1	25	0	1:1	0.084	1.197	0.101	-
793	23330	QPSK	A	10	25.0	24.02	0.15	Right Cheek	0	1	0	1:1	0.209	1.253	0.262	A10
793	23330	QPSK	A	10	24.0	23.22	0.16	Right Cheek	1	25	0	1:1	0.169	1.197	0.202	-
793	23330	QPSK	A	10	25.0	24.02	0.09	Right Tilt	0	1	0	1:1	0.117	1.253	0.147	-
793	23330	QPSK	A	10	24.0	23.22	-0.15	Right Tilt	1	25	0	1:1	0.099	1.197	0.119	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 25 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 860	26140	QPSK	A	20	21.0	19.34	0.10	Left Cheek	0	1	49	1:1	0.039	1.466	0.057	-
1 860	26140	QPSK	A	20	21.0	19.29	0.11	Left Cheek	0	50	25	1:1	0.039	1.483	0.058	A11
1 860	26140	QPSK	A	20	21.0	19.34	-0.15	Left Tilt	0	1	49	1:1	0.035	1.466	0.051	-
1 860	26140	QPSK	A	20	21.0	19.29	-0.18	Left Tilt	0	50	25	1:1	0.036	1.483	0.053	-
1 860	26140	QPSK	A	20	21.0	19.34	-0.12	Right Cheek	0	1	49	1:1	0.035	1.466	0.051	-
1 860	26140	QPSK	A	20	21.0	19.29	-0.17	Right Cheek	0	50	25	1:1	0.034	1.483	0.050	-
1 860	26140	QPSK	A	20	21.0	19.34	-0.13	Right Tilt	0	1	49	1:1	0.029	1.466	0.043	-
1 860	26140	QPSK	A	20	21.0	19.29	-0.10	Right Tilt	0	50	25	1:1	0.029	1.483	0.043	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 26 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	25.5	24.48	0.03	Left Cheek	0	1	0	1:1	0.110	1.265	0.139	-
831.5	26865	QPSK	A	15	24.5	23.60	-0.18	Left Cheek	1	36	0	1:1	0.153	1.230	0.188	-
831.5	26865	QPSK	A	15	25.5	24.48	-0.02	Left Tilt	0	1	0	1:1	0.123	1.265	0.156	-
831.5	26865	QPSK	A	15	24.5	23.60	0.15	Left Tilt	1	36	0	1:1	0.096	1.230	0.118	-
831.5	26865	QPSK	A	15	25.5	24.48	-0.10	Right Cheek	0	1	0	1:1	0.210	1.265	0.266	A12
831.5	26865	QPSK	A	15	24.5	23.60	-0.12	Right Cheek	1	36	0	1:1	0.164	1.230	0.202	-
831.5	26865	QPSK	A	15	25.5	24.48	0.05	Right Tilt	0	1	0	1:1	0.140	1.265	0.177	-
831.5	26865	QPSK	A	15	24.5	23.60	0.19	Right Tilt	1	36	0	1:1	0.104	1.230	0.128	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

LTE FDD Band 30 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	27710	QPSK	A	10	22.5	21.31	-0.16	Left Cheek	0	1	0	1:1	0.193	1.315	0.254	A13
2 310	27710	QPSK	A	10	21.5	20.37	0.17	Left Cheek	1	25	0	1:1	0.160	1.297	0.208	-
2 310	27710	QPSK	A	10	22.5	21.31	0.16	Left Tilt	0	1	0	1:1	0.065	1.315	0.085	-
2 310	27710	QPSK	A	10	21.5	20.37	0.05	Left Tilt	1	25	0	1:1	0.051	1.297	0.066	-
2 310	27710	QPSK	A	10	22.5	21.31	-0.10	Right Cheek	0	1	0	1:1	0.122	1.315	0.160	-
2 310	27710	QPSK	A	10	21.5	20.37	-0.15	Right Cheek	1	25	0	1:1	0.101	1.297	0.131	-
2 310	27710	QPSK	A	10	22.5	21.31	0.06	Right Tilt	0	1	0	1:1	0.082	1.315	0.108	-
2 310	27710	QPSK	A	10	21.5	20.37	0.13	Right Tilt	1	25	0	1:1	0.064	1.297	0.083	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

LTE TDD Band 41 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 680	41490	QPSK	A	20	24.5	23.66	-0.18	Left Cheek	0	1	0	1:1.58	0.195	1.213	0.237	A14
2 680	41490	QPSK	A	20	23.5	22.70	0.10	Left Cheek	1	50	0	1:1.58	0.165	1.202	0.198	-
2 680	41490	QPSK	A	20	24.5	23.66	0.10	Left Tilt	0	1	0	1:1.58	0.062	1.213	0.075	-
2 680	41490	QPSK	A	20	23.5	22.70	0.05	Left Tilt	1	50	0	1:1.58	0.056	1.202	0.067	-
2 680	41490	QPSK	A	20	24.5	23.66	-0.10	Right Cheek	0	1	0	1:1.58	0.100	1.213	0.121	-
2 680	41490	QPSK	A	20	23.5	22.70	0.11	Right Cheek	1	50	0	1:1.58	0.089	1.202	0.107	-
2 680	41490	QPSK	A	20	24.5	23.66	0.18	Right Tilt	0	1	0	1:1.58	0.112	1.213	0.136	-
2 680	41490	QPSK	A	20	23.5	22.70	0.01	Right Tilt	1	50	0	1:1.58	0.112	1.202	0.135	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

LTE TDD Band 48 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 603.3	55773	QPSK	G	20	17.0	16.25	-0.19	Left Cheek	0	1	0	1:1.58	0.082	1.189	0.097	-
3 603.3	55773	QPSK	G	20	17.0	16.32	-0.17	Left Cheek	0	50	0	1:1.58	0.081	1.169	0.095	-
3 603.3	55773	QPSK	G	20	17.0	16.25	0.14	Left Tilt	0	1	0	1:1.58	0.072	1.189	0.086	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.11	Left Tilt	0	50	0	1:1.58	0.074	1.169	0.087	-
3 603.3	55773	QPSK	G	20	17.0	16.25	0.13	Right Cheek	0	1	0	1:1.58	0.132	1.189	0.157	A15
3 603.3	55773	QPSK	G	20	17.0	16.32	0.02	Right Cheek	0	50	0	1:1.58	0.132	1.169	0.154	-
3 603.3	55773	QPSK	G	20	17.0	16.25	0.03	Right Tilt	0	1	0	1:1.58	0.087	1.189	0.103	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.02	Right Tilt	0	50	0	1:1.58	0.086	1.169	0.101	-
Uplink Carrier Aggregation																
3 603.3	55773	QPSK	G	20	17	15.75	-0.06	Right Cheek	0	1	0	1:1.58	0.120	1.334	0.160	-
3 583.5	55575	QPSK	G	20					0	1	99					
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

LTE FDD Band 66 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 770	132572	QPSK	A	20	21.0	19.56	-0.08	Left Cheek	0	1	0	1:1	0.053	1.393	0.074	-
1 770	132572	QPSK	A	20	21.0	19.62	0.00	Left Cheek	0	50	49	1:1	0.052	1.374	0.071	-
1 770	132572	QPSK	A	20	21.0	19.56	-0.09	Left Tilt	0	1	0	1:1	0.040	1.393	0.056	-
1 770	132572	QPSK	A	20	21.0	19.62	0.18	Left Tilt	0	50	49	1:1	0.040	1.374	0.055	-
1 770	132572	QPSK	A	20	21.0	19.56	0.14	Right Cheek	0	1	0	1:1	0.073	1.393	0.102	-
1 770	132572	QPSK	A	20	21.0	19.62	-0.15	Right Cheek	0	50	49	1:1	0.068	1.374	0.093	-
1 770	132572	QPSK	A	20	21.0	19.56	-0.13	Right Tilt	0	1	0	1:1	0.030	1.393	0.042	-
1 770	132572	QPSK	A	20	21.0	19.62	-0.14	Right Tilt	0	50	49	1:1	0.031	1.374	0.043	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.17	Left Cheek	0	1	0	1:1	0.331	1.132	0.375	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.05	Left Cheek	0	50	0	1:1	0.326	1.127	0.367	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.07	Left Tilt	0	1	0	1:1	0.250	1.132	0.283	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.03	Left Tilt	0	50	0	1:1	0.243	1.127	0.274	-
1 745	132322	QPSK	F	20	19.0	18.46	0.10	Right Cheek	0	1	0	1:1	0.637	1.132	0.721	A16
1 745	132322	QPSK	F	20	19.0	18.48	0.05	Right Cheek	0	50	0	1:1	0.630	1.127	0.710	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.02	Right Tilt	0	1	0	1:1	0.373	1.132	0.422	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.03	Right Tilt	0	50	0	1:1	0.369	1.127	0.416	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 71 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
683	133322	QPSK	A	20	25.0	24.50	0.11	Left Cheek	0	1	0	1:1	0.163	1.122	0.183	-
683	133322	QPSK	A	20	24.0	23.67	-0.17	Left Cheek	1	50	0	1:1	0.141	1.079	0.152	-
683	133322	QPSK	A	20	25.0	24.50	0.11	Left Tilt	0	1	0	1:1	0.022	1.122	0.025	-
683	133322	QPSK	A	20	24.0	23.67	-0.18	Left Tilt	1	50	0	1:1	0.063	1.079	0.068	-
683	133322	QPSK	A	20	25.0	24.50	-0.18	Right Cheek	0	1	0	1:1	0.173	1.122	0.194	A17
683	133322	QPSK	A	20	24.0	23.67	-0.12	Right Cheek	1	50	0	1:1	0.137	1.079	0.148	-
683	133322	QPSK	A	20	25.0	24.50	0.11	Right Tilt	0	1	0	1:1	0.083	1.122	0.093	-
683	133322	QPSK	A	20	24.0	23.67	-0.03	Right Tilt	1	50	0	1:1	0.070	1.079	0.076	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

NR FDD Band 2 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.14	Left Cheek	0	1	1	1:1	0.157	1.349	0.212	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.05	Left Cheek	0	108	0	1:1	0.153	1.346	0.206	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	0.08	Left Tilt	0	1	1	1:1	0.104	1.349	0.140	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	-0.03	Left Tilt	0	108	0	1:1	0.100	1.346	0.135	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	0.03	Right Cheek	0	1	1	1:1	0.278	1.349	0.375	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.04	Right Cheek	0	108	0	1:1	0.277	1.346	0.373	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.10	Right Tilt	0	1	1	1:1	0.154	1.349	0.208	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	-0.19	Right Tilt	0	108	0	1:1	0.165	1.346	0.222	-
1 880	376000	CP QPSK	F	40	19.0	17.60	-0.06	Right Cheek	0	1	1	1:1	0.318	1.380	0.439	A18
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram								

NR FDD Band 5 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	25.5	24.47	0.12	Left Cheek	0	1	53	1:1	0.189	1.268	0.240	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.37	-0.02	Left Cheek	0	50	28	1:1	0.187	1.297	0.243	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.47	0.06	Left Tilt	0	1	53	1:1	0.122	1.268	0.155	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.37	0.13	Left Tilt	0	50	28	1:1	0.122	1.297	0.158	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.47	0.13	Right Cheek	0	1	53	1:1	0.216	1.268	0.274	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.37	0.07	Right Cheek	0	50	28	1:1	0.234	1.297	0.303	A19
836.5	167300	DFT-s QPSK	A	20	25.5	24.47	-0.02	Right Tilt	0	1	53	1:1	0.149	1.268	0.189	-
836.5	167300	DFT-s QPSK	A	20	25.5	24.37	0.19	Right Tilt	0	50	28	1:1	0.136	1.297	0.176	-
836.5	167300	CP QPSK	A	20	24.0	22.86	0.17	Right Cheek	1.5	1	1	1:1	0.158	1.300	0.205	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR FDD Band 25 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.66	0.11	Left Cheek	0	1	1	1:1	0.073	1.361	0.099	A20
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.72	0.17	Left Cheek	0	108	0	1:1	0.041	1.343	0.055	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.66	-0.16	Left Tilt	0	1	108	1:1	0.057	1.361	0.078	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.72	-0.05	Left Tilt	0	108	0	1:1	0.055	1.343	0.074	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.66	-0.15	Right Cheek	0	1	108	1:1	0.060	1.361	0.082	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.72	0.17	Right Cheek	0	108	0	1:1	0.061	1.343	0.082	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.66	-0.07	Right Tilt	0	1	108	1:1	0.053	1.361	0.072	-
1 882.5	376500	DFT-s QPSK	A	40	21.0	19.72	0.00	Right Tilt	0	108	0	1:1	0.048	1.343	0.064	-
1 882.5	376500	CP QPSK	A	40	21.0	19.52	-0.14	Left Cheek	0	1	1	1:1	0.072	1.406	0.101	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR FDD Band 30 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	462000	DFT-s QPSK	A	10	22.5	21.49	-0.13	Left Cheek	0	1	1	1:1	0.180	1.262	0.227	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.47	0.10	Left Cheek	0	25	14	1:1	0.185	1.268	0.235	A21
2 310	462000	DFT-s QPSK	A	10	22.5	21.49	0.18	Left Tilt	0	1	1	1:1	0.064	1.262	0.081	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.47	0.19	Left Tilt	0	25	14	1:1	0.063	1.268	0.080	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.49	0.19	Right Cheek	0	1	1	1:1	0.141	1.262	0.178	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.47	-0.11	Right Cheek	0	25	14	1:1	0.139	1.268	0.176	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.49	0.18	Right Tilt	0	1	1	1:1	0.097	1.262	0.122	-
2 310	462000	DFT-s QPSK	A	10	22.5	21.47	0.04	Right Tilt	0	25	14	1:1	0.097	1.268	0.123	-
2 310	462000	CP QPSK	A	10	21.0	19.99	-0.10	Left Cheek	1.5	1	1	1:1	0.139	1.262	0.175	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR TDD Band 41 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.80	-0.13	Left Cheek	0	1	1	1:1	0.479	1.175	0.563	A22
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.40	-0.15	Left Cheek	0	135	69	1:1	0.447	1.288	0.576	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.80	-0.01	Left Tilt	0	1	1	1:1	0.222	1.175	0.261	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.40	-0.12	Left Tilt	0	135	69	1:1	0.185	1.288	0.238	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.80	-0.19	Right Cheek	0	1	1	1:1	0.258	1.175	0.303	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.40	-0.10	Right Cheek	0	135	69	1:1	0.231	1.288	0.298	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.80	-0.14	Right Tilt	0	1	1	1:1	0.250	1.175	0.294	-
2 592.99	518598	DFT-s QPSK	A	100	27.5	26.40	-0.05	Right Tilt	0	135	69	1:1	0.215	1.288	0.277	-
2 592.99	518598	CP QPSK	A	100	26.0	25.13	-0.11	Right Cheek	1.5	1	1	1:1	0.411	1.222	0.502	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR TDD Band 48 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.17	Left Cheek	0	1	53	1:1	0.053	1.294	0.069	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	-0.09	Left Cheek	0	50	0	1:1	0.055	1.268	0.070	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.04	Left Tilt	0	1	53	1:1	0.007	1.294	0.009	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	0.03	Left Tilt	0	50	0	1:1	0.006	1.268	0.008	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.12	Right Cheek	0	1	53	1:1	0.167	1.294	0.216	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	-0.02	Right Cheek	0	50	0	1:1	0.169	1.268	0.214	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.19	Right Tilt	0	1	53	1:1	0.123	1.294	0.159	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	-0.04	Right Tilt	0	50	0	1:1	0.084	1.268	0.107	-
3 624.99	641666	CP QPSK	G	40	15.0	13.93	-0.08	Right Cheek	0	1	1	1:1	0.239	1.279	0.306	A23
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.05	Left Cheek	0	1	53	1:1	0.042	1.186	0.050	-
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	-0.01	Left Tilt	0	1	53	1:1	0.030	1.186	0.036	-
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.02	Right Cheek	0	1	53	1:1	0.063	1.186	0.075	-
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.01	Right Tilt	0	1	53	1:1	0.058	1.186	0.069	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.04	Left Cheek	0	1	53	1:1	0.048	1.291	0.062	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.02	Left Tilt	0	1	53	1:1	0.046	1.291	0.059	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	-0.17	Right Cheek	0	1	53	1:1	0.191	1.291	0.247	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.12	Right Tilt	0	1	53	1:1	0.123	1.291	0.159	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.01	Left Cheek	0	1	53	1:1	0.026	1.138	0.030	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	-0.08	Left Tilt	0	1	53	1:1	0.003	1.138	0.003	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.03	Right Cheek	0	1	53	1:1	0.000	1.138	0.000	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.02	Right Tilt	0	1	53	1:1	0.000	1.138	0.000	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

Note : Ant I, F, H SRS was tested with DFT-s OFDM QPSK 1RB 53offset as CW was the Limitation of the manufacturer's S/W tool setup.

NR FDD Band 66 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	A	40	21.0	19.94	0.18	Left Cheek	0	1	108	1:1	0.051	1.276	0.065	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.88	0.16	Left Cheek	0	108	108	1:1	0.065	1.294	0.084	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.94	-0.15	Left Tilt	0	1	108	1:1	0.041	1.276	0.052	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.88	-0.13	Left Tilt	0	108	108	1:1	0.050	1.294	0.065	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.94	-0.19	Right Cheek	0	1	108	1:1	0.049	1.276	0.063	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.88	-0.14	Right Cheek	0	108	108	1:1	0.061	1.294	0.079	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.94	0.03	Right Tilt	0	1	108	1:1	0.033	1.276	0.042	-
1 745	349000	DFT-s QPSK	A	40	21.0	19.88	-0.08	Right Tilt	0	108	108	1:1	0.042	1.294	0.054	-
1 745	349000	CP QPSK	A	40	21.0	19.84	-0.15	Left Cheek	0	1	1	1:1	0.047	1.306	0.061	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.16	Left Cheek	0	1	1	1:1	0.237	1.312	0.311	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	-0.17	Left Cheek	0	108	0	1:1	0.237	1.309	0.310	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	0.06	Left Tilt	0	1	1	1:1	0.183	1.312	0.240	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	-0.10	Left Tilt	0	108	0	1:1	0.173	1.309	0.226	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.09	Right Cheek	0	1	1	1:1	0.541	1.312	0.710	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	-0.02	Right Cheek	0	108	0	1:1	0.528	1.309	0.691	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.12	Right Tilt	0	1	1	1:1	0.312	1.312	0.409	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	0.11	Right Tilt	0	108	0	1:1	0.303	1.309	0.397	-
1 745	349000	CP QPSK	F	40	19.0	17.72	0.00	Right Cheek	0	1	1	1:1	0.544	1.343	0.731	A24
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR FDD Band 70 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.80	-0.16	Left Cheek	0	1	77	1:1	0.135	1.318	0.178	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.88	0.17	Left Cheek	0	36	22	1:1	0.129	1.294	0.167	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.80	0.12	Left Tilt	0	1	77	1:1	0.115	1.318	0.152	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.88	0.04	Left Tilt	0	36	22	1:1	0.112	1.294	0.145	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.80	-0.01	Right Cheek	0	1	77	1:1	0.153	1.318	0.202	A25
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.88	0.17	Right Cheek	0	36	22	1:1	0.151	1.294	0.195	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.80	-0.11	Right Tilt	0	1	77	1:1	0.110	1.318	0.145	-
1 702.5	340500	DFT-s QPSK	A	15	25.0	23.88	0.10	Right Tilt	0	36	22	1:1	0.102	1.294	0.132	-
1 702.5	340500	CP QPSK	A	15	23.5	22.18	-0.12	Right Cheek	1.5	1	1	1:1	0.101	1.355	0.137	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR FDD Band 71 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	-0.11	Left Cheek	0	1	53	1:1	0.143	1.146	0.164	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	0.17	Left Cheek	0	50	28	1:1	0.142	1.183	0.168	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.03	Left Tilt	0	1	53	1:1	0.079	1.146	0.091	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	0.12	Left Tilt	0	50	28	1:1	0.075	1.183	0.089	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.16	Right Cheek	0	1	53	1:1	0.162	1.146	0.186	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	0.04	Right Cheek	0	50	28	1:1	0.171	1.183	0.202	A26
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.18	Right Tilt	0	1	53	1:1	0.081	1.146	0.093	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.06	Right Tilt	0	50	28	1:1	0.087	1.183	0.103	-
680.5	136100	CP QPSK	A	20	23.5	22.48	-0.12	Right Cheek	1.5	1	1	1:1	0.109	1.265	0.138	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

NR TDD Band 77 Head SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	-0.05	Left Cheek	0	1	271	1:1	0.063	1.072	0.068	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.02	Left Cheek	0	135	69	1:1	0.067	1.054	0.071	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	-0.11	Left Tilt	0	1	271	1:1	0.059	1.072	0.063	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.01	Left Tilt	0	135	69	1:1	0.056	1.054	0.059	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.03	Right Cheek	0	1	271	1:1	0.225	1.072	0.241	A27
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.02	Right Cheek	0	135	69	1:1	0.215	1.054	0.227	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	-0.04	Right Tilt	0	1	271	1:1	0.173	1.072	0.185	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	N/A	Right Tilt	0	135	69	1:1	0.134	1.054	0.141	-
3 930	662000	CP QPSK	G	100	14.0	13.67	0.03	Right Cheek	0	1	1	1:1	0.154	1.079	0.166	-
3500.01	633334	DFT-s QPSK	G	100	14.0	13.18	0.06	Right Cheek	0	1	271	1:1	0.175	1.208	0.211	DoD
3500.01	633334	DFT-s QPSK	G	100	14.0	13.27	0.02	Right Cheek	0	135	138	1:1	0.188	1.183	0.222	DoD
3 750	650000	DFT-s QPSK	I	100	10.0	9.97	0.03	Left Cheek	0	1	137	1:1	0.015	1.007	0.015	-
3 750	650000	DFT-s QPSK	I	100	10.0	9.97	-0.01	Left Tilt	0	1	137	1:1	0.048	1.007	0.048	-
3750	650000	DFT-s QPSK	I	100	10.0	9.97	0.03	Right Cheek	0	1	137	1:1	0.060	1.007	0.060	-
3750	650000	DFT-s QPSK	I	100	10.0	9.97	0.13	Right Tilt	0	1	137	1:1	0.078	1.007	0.079	-
3500.01	633334	DFT-s QPSK	I	100	10.0	8.11	-0.09	Right Tilt	0	1	137	1:1	0.050	1.545	0.077	DoD
3750	650000	DFT-s QPSK	F	100	14.0	13.99	0.04	Left Cheek	0	1	137	1:1	0.035	1.002	0.035	-
3750	650000	DFT-s QPSK	F	100	14.0	13.99	0.01	Left Tilt	0	1	137	1:1	0.002	1.002	0.002	-
3750	650000	DFT-s QPSK	F	100	14.0	13.99	0.08	Right Cheek	0	1	137	1:1	0.174	1.002	0.174	-
3750	650000	DFT-s QPSK	F	100	14.0	13.99	0.03	Right Tilt	0	1	137	1:1	0.174	1.002	0.174	-
3500.01	633334	DFT-s QPSK	F	100	14.0	13.36	-0.09	Right Cheek	0	1	137	1:1	0.170	1.159	0.197	DoD
3750	650000	DFT-s QPSK	H	100	10.0	9.14	0.02	Left Cheek	0	1	137	1:1	0.058	1.219	0.071	-
3750	650000	DFT-s QPSK	H	100	10.0	9.14	0.03	Left Tilt	0	1	137	1:1	0.050	1.219	0.061	-
3750	650000	DFT-s QPSK	H	100	10.0	9.14	-0.08	Right Cheek	0	1	137	1:1	0.009	1.219	0.011	-
3750	650000	DFT-s QPSK	H	100	10.0	9.14	0.02	Right Tilt	0	1	137	1:1	0.009	1.219	0.011	-
3500.01	633334	DFT-s QPSK	H	100	10.0	9.03	-0.19	Left Cheek	0	1	137	1:1	0.019	1.250	0.024	DoD
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram							

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

DTS Head SAR															
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 412	1	802.11b	F	20	1	19.0	18.11	-0.17	Left Cheek	98.6	0.218	1.227	1.014	0.271	-
2 412	1	802.11b	F	20	1	19.0	18.11	-0.04	Left Tilt	98.6	0.240	1.227	1.014	0.299	-
2 412	1	802.11b	F	20	1	19.0	18.11	-0.04	Right Cheek	98.6	0.226	1.227	1.014	0.281	-
2 412	1	802.11b	F	20	1	19.0	18.11	-0.04	Right Tilt	98.6	0.242	1.227	1.014	0.301	A28
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII2A Head SAR															
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 280	56	802.11a	F	20	6Mbps	17.0	16.95	-0.12	Left Cheek	94.1	0.411	1.012	1.063	0.442	-
5 280	56	802.11a	F	20	6Mbps	17.0	16.95	-0.06	Left Tilt	94.1	0.501	1.012	1.063	0.539	-
5 280	56	802.11a	F	20	6Mbps	17.0	16.95	0.01	Right Cheek	94.1	0.368	1.012	1.063	0.396	-
5 280	56	802.11a	F	20	6Mbps	17.0	16.95	-0.10	Right Tilt	94.1	0.590	1.012	1.063	0.635	A29
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII2C Head SAR															
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 620	124	802.11a	F	20	6Mbps	17.0	16.84	0.14	Left Cheek	94.1	0.381	1.038	1.063	0.420	-
5 620	124	802.11a	F	20	6Mbps	17.0	16.84	0.12	Left Tilt	94.1	0.444	1.038	1.063	0.490	A30
5 620	124	802.11a	F	20	6Mbps	17.0	16.84	0.15	Right Cheek	94.1	0.296	1.038	1.063	0.327	-
5 620	124	802.11a	F	20	6Mbps	17.0	16.84	0.12	Right Tilt	94.1	0.354	1.038	1.063	0.390	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII3 Head SAR															
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 745	149	802.11a	F	20	6Mbps	17.0	16.77	-0.12	Left Cheek	94.1	0.317	1.054	1.063	0.355	-
5 745	149	802.11a	F	20	6Mbps	17.0	16.77	-0.13	Left Tilt	94.1	0.394	1.054	1.063	0.441	A31
5 745	149	802.11a	F	20	6Mbps	17.0	16.77	-0.14	Right Cheek	94.1	0.248	1.054	1.063	0.278	-
5 745	149	802.11a	F	20	6Mbps	17.0	16.77	0.05	Right Tilt	94.1	0.372	1.054	1.063	0.417	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

UNII4 Head SAR															
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 865	173	802.11a	F	20	6Mbps	17.0	15.75	-0.04	Left Cheek	94.1	0.214	1.334	1.063	0.303	-
5 865	173	802.11a	F	20	6Mbps	17.0	15.75	-0.14	Left Tilt	94.1	0.259	1.334	1.063	0.367	A32
5 865	173	802.11a	F	20	6Mbps	17.0	15.75	0.07	Right Cheek	94.1	0.187	1.334	1.063	0.265	-
5 865	173	802.11a	F	20	6Mbps	17.0	15.75	0.16	Right Tilt	94.1	0.222	1.334	1.063	0.315	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Head 1.6 W/kg Averaged over 1 gram						

DSS Head SAR													
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 402	0	DH5	F	20	13.0	12.73	-0.09	Left Cheek	0.056	1.064	1.009	0.060	-
2 402	0	DH5	F	20	13.0	12.73	-0.14	Left Tilt	0.064	1.064	1.009	0.069	-
2 402	0	DH5	F	20	13.0	12.73	-0.15	Right Cheek	0.065	1.064	1.009	0.070	-
2 402	0	DH5	F	20	13.0	12.73	-0.12	Right Tilt	0.072	1.064	1.009	0.077	-
2 402	37	LE 125K 255	F	20	13.0	11.97	-0.16	Left Cheek	0.067	1.268	1.002	0.085	-
2 402	37	LE 125K 255	F	20	13.0	11.97	-0.06	Left Tilt	0.089	1.268	1.002	0.113	A33
2 402	37	LE 125K 255	F	20	13.0	11.97	0.11	Right Cheek	0.072	1.268	1.002	0.091	-
2 402	37	LE 125K 255	F	20	13.0	11.97	-0.15	Right Tilt	0.081	1.268	1.002	0.103	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram					

13.1.2 Body Worn SAR Measurement Considerations

GSM 850 Body worn SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.10	Rear	1:2.08	5	0.549	1.435	0.788	B1
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.07	Front	1:2.08	5	0.268	1.435	0.385	
836.6	190	GSM Voice	A	33.0	31.45	-0.18	Rear	1:8.3	5	0.512	1.429	0.732	
836.6	190	GSM Voice	A	33.0	31.45	-0.01	Front	1:8.3	5	0.286	1.429	0.409	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

GSM1900 Body worn SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.10	Rear	1:2.07	5	0.702	1.164	0.817	B2
1 850.2	512	GPRS 4Tx	A	23.5	22.89	-0.07	Rear	1:2.07	5	0.572	1.151	0.658	-
1 909.8	810	GPRS 4Tx	A	23.5	22.40	-0.03	Rear	1:2.07	5	0.557	1.288	0.717	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.12	Front	1:2.07	5	0.374	1.164	0.435	-
1 880	661	GSM Voice	A	29.5	27.83	-0.19	Rear	1:8.3	5	0.624	1.469	0.917	-
1 880	661	GSM Voice	A	29.5	27.83	-0.02	Front	1:8.3	5	0.328	1.469	0.482	-
1 850.2	512	GSM Voice	A	29.5	27.82	-0.07	Rear	1:8.3	5	0.602	1.472	0.886	-
1 909.8	810	GSM Voice	A	29.5	27.84	-0.03	Rear	1:8.3	5	0.586	1.466	0.859	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

UMTS BAND 5 Bodyworn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	24.5	23.15	-0.02	Rear	5	0.705	1.365	0.962	-
836.6	4183	RMC	A	24.5	23.15	0.10	Front	5	0.328	1.365	0.448	-
826.4	4132	RMC	A	24.5	23.18	-0.06	Rear	5	0.605	1.355	0.820	-
846.6	4233	RMC	A	24.5	23.25	-0.11	Rear	5	0.754	1.334	1.006	B3
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS BAND 4 Bodyworn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	A	20.0	18.71	-0.11	Rear	5	0.735	1.346	0.989	-
1 712.4	1312	RMC	A	20.0	18.66	-0.16	Rear	5	0.693	1.361	0.943	-
1 752.6	1513	RMC	A	20.0	18.54	0.02	Rear	5	0.803	1.400	1.124	-
1 732.4	1412	RMC	A	20.0	18.71	-0.15	Front	5	0.371	1.346	0.499	-
1 752.6	1513	RMC	A	20.0	18.54	0.02	Rear	5	0.807	1.400	1.130	B4
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS BAND 2 Bodyworn SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	A	20.0	18.91	-0.11	Rear	5	0.853	1.285	1.096	-
1 880	9400	RMC	A	20.0	18.91	-0.17	Front	5	0.466	1.285	0.599	-
1 852.4	9262	RMC	A	20.0	18.73	-0.04	Rear	5	0.885	1.340	1.186	B5
1 907.6	9538	RMC	A	20.0	18.81	0.01	Rear	5	0.823	1.315	1.082	-
1 852.4	9262	RMC	A	20.0	18.73	-0.01	Rear	5	0.847	1.340	1.135	-
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 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	18900	QPSK	F	20	19.0	17.22	0.16	Rear	0	1	0	1:1	5	0.243	1.507	0.366	-
1 880	18900	QPSK	F	20	19.0	17.21	0.14	Rear	0	50	0	1:1	5	0.244	1.510	0.368	B6
1 880	18900	QPSK	F	20	19.0	17.22	-0.10	Front	0	1	0	1:1	5	0.124	1.507	0.187	-
1 880	18900	QPSK	F	20	19.0	17.21	-0.13	Front	0	50	0	1:1	5	0.131	1.510	0.198	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 7 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 510	20850	QPSK	A	20	19.0	17.59	-0.11	Rear	0	1	0	1:1	5	0.506	1.384	0.700	-
2 510	20850	QPSK	A	20	19.0	17.69	0.01	Rear	0	50	25	1:1	5	0.551	1.352	0.745	B7
2 510	20850	QPSK	A	20	19.0	17.59	-0.13	Front	0	1	0	1:1	5	0.252	1.384	0.349	-
2 510	20850	QPSK	A	20	19.0	17.69	-0.10	Front	0	50	25	1:1	5	0.256	1.352	0.346	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 12 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	25.5	24.68	-0.02	Rear	0	1	0	1:1	5	0.688	1.208	0.831	B8
707.5	23095	QPSK	A	10	24.5	23.76	0.00	Rear	1	25	0	1:1	5	0.591	1.186	0.701	-
707.5	23095	QPSK	A	10	24.5	23.83	0.05	Rear	1	50	0	1:1	5	0.651	1.167	0.760	-
707.5	23095	QPSK	A	10	25.5	24.68	0.06	Front	0	1	0	1:1	5	0.444	1.208	0.536	-
707.5	23095	QPSK	A	10	24.5	23.76	-0.14	Front	1	25	0	1:1	5	0.251	1.186	0.298	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 13 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	25.0	23.80	0.02	Rear	0	1	0	1:1	5	0.668	1.318	0.880	B9
782	23230	QPSK	A	10	24.0	22.99	0.06	Rear	1	25	0	1:1	5	0.567	1.262	0.716	-
782	23230	QPSK	A	10	24.0	23.00	0.03	Rear	1	50	0	1:1	5	0.585	1.259	0.737	-
782	23230	QPSK	A	10	25.0	23.80	0.04	Front	0	1	0	1:1	5	0.343	1.318	0.452	-
782	23230	QPSK	A	10	24.0	22.99	0.15	Front	1	25	0	1:1	5	0.294	1.262	0.371	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD BAND 14 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
793	23330	QPSK	A	10	25.0	24.02	-0.01	Rear	0	1	0	1:1	5	0.767	1.253	0.961	B10
793	23330	QPSK	A	10	24.0	23.22	0.03	Rear	1	25	0	1:1	5	0.660	1.197	0.790	-
793	23330	QPSK	A	10	24.0	23.23	0.00	Rear	1	50	0	1:1	5	0.688	1.194	0.821	-
793	23330	QPSK	A	10	25.0	24.02	-0.01	Front	0	1	0	1:1	5	0.442	1.253	0.554	-
793	23330	QPSK	A	10	24.0	23.22	-0.02	Front	1	25	0	1:1	5	0.355	1.197	0.425	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD BAND 25 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 860	26140	QPSK	A	20	20	18.19	-0.03	Rear	0	1	49	1:1	5	0.437	1.517	0.663	B11
1 860	26140	QPSK	A	20	20	18.17	-0.15	Rear	0	50	25	1:1	5	0.432	1.524	0.658	-
1 860	26140	QPSK	A	20	20	18.19	-0.10	Front	0	1	49	1:1	5	0.195	1.517	0.296	-
1 860	26140	QPSK	A	20	20	18.17	-0.13	Front	0	50	25	1:1	5	0.200	1.524	0.305	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 26 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	24.0	22.27	0.12	Rear	0	1	0	1:1	5	0.555	1.489	0.826	-
831.5	26865	QPSK	A	15	24.0	22.29	-0.11	Rear	0	36	0	1:1	5	0.621	1.483	0.921	-
831.5	26865	QPSK	A	15	24.0	22.28	0.12	Rear	0	75	0	1:1	5	0.735	1.486	1.092	B12
831.5	26865	QPSK	A	15	24.0	22.27	-0.01	Front	0	1	0	1:1	5	0.250	1.489	0.372	-
831.5	26865	QPSK	A	15	24.0	22.29	-0.04	Front	0	36	0	1:1	5	0.243	1.483	0.360	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 30 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	27710	QPSK	A	10	20.0	18.48	0.00	Rear	0	1	24	1:1	5	0.549	1.419	0.779	B13
2 310	27710	QPSK	A	10	20.0	18.54	0.08	Rear	0	25	24	1:1	5	0.539	1.400	0.755	-
2 310	27710	QPSK	A	10	20.0	18.48	-0.10	Front	0	1	24	1:1	5	0.286	1.419	0.406	-
2 310	27710	QPSK	A	10	20.0	18.54	-0.06	Front	0	25	24	1:1	5	0.285	1.400	0.399	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE TDD BAND 41 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 680	41490	QPSK	A	20	20.0	18.70	0.04	Rear	0	1	0	1:1.58	5	0.768	1.349	1.036	B14
2 506	39750	QPSK	A	20	20.0	18.41	-0.14	Rear	0	1	0	1:1.58	5	0.611	1.442	0.881	-
2 549.5	40185	QPSK	A	20	20.0	18.29	-0.16	Rear	0	1	0	1:1.58	5	0.607	1.483	0.900	-
2 592.99	40620	QPSK	A	20	20.0	18.48	0.09	Rear	0	1	0	1:1.58	5	0.649	1.419	0.921	-
2 636.5	41055	QPSK	A	20	20.0	18.25	0.11	Rear	0	1	0	1:1.58	5	0.698	1.496	1.044	-
2 680	41490	QPSK	A	20	20.0	18.70	0.15	Rear	0	50	0	1:1.58	5	0.643	1.349	0.867	-
2 506	39750	QPSK	A	20	20.0	18.46	-0.12	Rear	0	50	0	1:1.58	5	0.611	1.426	0.871	-
2 549.5	40185	QPSK	A	20	20.0	18.32	0.12	Rear	0	50	0	1:1.58	5	0.589	1.472	0.867	-
2 592.99	40620	QPSK	A	20	20.0	18.21	-0.12	Rear	0	50	0	1:1.58	5	0.629	1.510	0.950	-
2 636.5	41055	QPSK	A	20	20.0	18.26	0.13	Rear	0	50	0	1:1.58	5	0.681	1.493	1.017	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.11	Rear	0	100	0	1:1.58	5	0.626	1.349	0.844	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.11	Front	0	1	0	1:1.58	5	0.185	1.349	0.250	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.70	Front	0	50	0	1:1.58	5	0.182	1.349	0.246	-
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 48 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 603.3	55773	QPSK	G	20	17.0	16.25	0.02	Rear	0	1	0	1:1.58	5	0.347	1.189	0.413	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.08	Rear	0	50	0	1:1.58	5	0.349	1.169	0.408	B15
3 603.3	55773	QPSK	G	20	17.0	16.25	0.01	Front	0	1	0	1:1.58	5	0.045	1.189	0.054	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.06	Front	0	50	0	1:1.58	5	0.045	1.169	0.053	-
3 603.3	55773	QPSK	G	20	17.0	15.75	0.1	Rear	0	1	0	1:1.58	5	0.289	1.334	0.386	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD BAND 66 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 770	132572	QPSK	A	20	19.0	17.51	-0.09	Rear	0	1	0	1:1	5	0.340	1.409	0.479	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.11	Rear	0	50	49	1:1	5	0.350	1.371	0.480	B16
1 770	132572	QPSK	A	20	19.0	17.51	-0.08	Front	0	1	0	1:1	5	0.241	1.409	0.340	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.10	Front	0	50	49	1:1	5	0.248	1.371	0.340	-
1 745	132322	QPSK	F	20	19.0	18.46	0.03	Rear	0	1	0	1:1	5	0.295	1.132	0.334	-
1 745	132322	QPSK	F	20	19.0	18.48	0.04	Rear	0	50	0	1:1	5	0.292	1.127	0.329	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.14	Front	0	1	0	1:1	5	0.284	1.132	0.321	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.20	Front	0	50	0	1:1	5	0.282	1.127	0.318	-
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 71 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
683	133322	QPSK	A	20	25.0	24.50	-0.05	Rear	0	1	0	1:1	5	0.530	1.122	0.595	-
683	133322	QPSK	A	20	24.0	23.67	0.02	Rear	1	50	0	1:1	5	0.533	1.079	0.575	B17
683	133322	QPSK	A	20	25.0	24.50	-0.05	Front	0	1	0	1:1	5	0.287	1.122	0.322	-
683	133322	QPSK	A	20	24.0	23.67	0.07	Front	1	50	0	1:1	5	0.247	1.079	0.267	-
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 2 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	0.13	Rear	0	1	1	1:1	5	0.152	1.349	0.205	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.06	Rear	0	108	0	1:1	5	0.156	1.346	0.210	B18
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.06	Front	0	1	1	1:1	5	0.154	1.349	0.208	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.13	Front	0	108	0	1:1	5	0.151	1.346	0.203	-
1 880	376000	CP QPSK	F	40	19.0	17.60	-0.14	Rear	0	1	1	1:1	5	0.153	1.380	0.211	-
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 5 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.01	Rear	0	1	104	1:1	5	0.751	1.432	1.075	B19
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	0.07	Rear	0	50	28	1:1	5	0.650	1.413	0.918	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.46	-0.08	Rear	0	100	0	1:1	5	0.562	1.426	0.801	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.04	Front	0	1	104	1:1	5	0.320	1.432	0.458	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	-0.10	Front	0	50	28	1:1	5	0.245	1.413	0.346	-
836.5	167300	CP QPSK	A	20	24.0	22.44	-0.06	Rear	0	1	1	1:1	5	0.703	1.432	1.007	-
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 25 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	-0.03	Rear	0	1	108	1:1	5	0.587	1.462	0.858	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	-0.10	Rear	0	108	0	1:1	5	0.627	1.531	0.960	B20
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.20	-0.06	Rear	0	216	0	1:1	5	0.610	1.514	0.924	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	-0.02	Front	0	1	108	1:1	5	0.208	1.462	0.308	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	0.05	Front	0	108	0	1:1	5	0.210	1.531	0.311	-
1 882.5	376500	CP QPSK	A	40	20.0	18.19	0.08	Rear	0	1	1	1:1	5	0.475	1.517	0.722	-
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 30 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	-0.19	Rear	0	1	1	1:1	5	0.545	1.324	0.722	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	-0.14	Rear	0	25	0	1:1	5	0.624	1.334	0.832	B21
2 310	462000	DFT-s QPSK	A	10	20.0	18.72	0.05	Rear	0	50	0	1:1	5	0.604	1.343	0.811	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	-0.14	Front	0	1	1	1:1	5	0.347	1.324	0.459	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	-0.18	Front	0	25	0	1:1	5	0.347	1.334	0.463	-
2 310	462000	CP QPSK	A	10	20.0	18.80	0.03	Rear	0	1	1	1:1	5	0.525	1.318	0.692	-
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 41 Bodyworn SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	-0.02	Rear	0	1	1	1:1	5	0.306	1.377	0.421	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	-0.11	Rear	0	135	0	1:1	5	0.198	1.419	0.281	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	-0.19	Front	0	1	1	1:1	5	0.106	1.377	0.146	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	-0.13	Front	0	135	0	1:1	5	0.112	1.419	0.159	-
2 592.99	518598	CP QPSK	A	100	18.0	16.66	-0.11	Rear	0	1	1	1:1	5	0.474	1.361	0.645	B22
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 48 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	0.01	Rear	0	1	53	1:1	5	0.374	1.294	0.484	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	0.04	Rear	0	50	0	1:1	5	0.333	1.268	0.422	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.04	Front	0	1	53	1:1	5	0.041	1.294	0.053	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	0.00	Front	0	50	0	1:1	5	0.039	1.268	0.049	-
3 624.99	641666	CP QPSK	G	40	15.0	13.93	0.11	Rear	0	1	1	1:1	5	0.485	1.279	0.620	B23
3624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.03	Rear	0	1	53	1:1	5	0.132	1.186	0.157	-
3624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.02	Front	0	1	53	1:1	5	0.040	1.186	0.047	-
3624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.02	Rear	0	1	53	1:1	5	0.053	1.291	0.068	-
3624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.12	Front	0	1	53	1:1	5	0.064	1.291	0.083	-
3624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.01	Rear	0	1	53	1:1	5	0.134	1.138	0.152	-
3624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.02	Front	0	1	53	1:1	5	0.000	1.138	0.000	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

Note : Ant I, F, H SRS was tested with DFT-s OFDM QPSK 1RB 53offset as CW was the Limitation of the manufacturer's S/W tool setup.

NR FDD BAND 66 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	0.01	Rear	0	1	108	1:1	5	0.344	1.455	0.501	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	-0.08	Rear	0	108	0	1:1	5	0.365	1.469	0.536	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	-0.04	Front	0	1	108	1:1	5	0.212	1.455	0.308	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	0.09	Front	0	108	0	1:1	5	0.197	1.469	0.289	-
1 745	349000	CP QPSK	A	40	19.0	17.07	-0.10	Rear	0	1	1	1:1	5	0.390	1.560	0.608	B24
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	0.09	Rear	0	1	1	1:1	5	0.246	1.312	0.323	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	0.15	Rear	0	108	0	1:1	5	0.244	1.309	0.319	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.19	Front	0	1	1	1:1	5	0.219	1.312	0.287	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	0.01	Front	0	108	0	1:1	5	0.215	1.309	0.281	-
1 745	349000	CP QPSK	F	40	19.0	17.72	0.05	Rear	0	1	1	1:1	5	0.250	1.343	0.336	-
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 70 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	-0.03	Rear	0	1	77	1:1	5	0.618	1.535	0.949	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.02	Rear	0	36	22	1:1	5	0.607	1.507	0.915	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.23	-0.19	Rear	0	75	0	1:1	5	0.773	1.503	1.162	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	-0.03	Front	0	1	77	1:1	5	0.311	1.535	0.477	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.04	Front	0	36	22	1:1	5	0.307	1.507	0.463	-
1 702.5	340500	CP QPSK	A	15	22.0	20.28	0.00	Rear	0	1	1	1:1	5	0.792	1.486	1.177	B25
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 71 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.06	Rear	0	1	53	1:1	5	0.694	1.146	0.795	B26
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.01	Rear	0	50	28	1:1	5	0.635	1.183	0.751	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.02	Front	0	1	53	1:1	5	0.242	1.146	0.277	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.02	Front	0	50	28	1:1	5	0.218	1.183	0.258	-
680.5	136100	CP QPSK	A	20	23.5	22.48	0.01	Rear	1.5	1	1	1:1	5	0.426	1.265	0.539	-
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 77 Bodyworn SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.01	Rear	0	1	271	1:1	5	0.466	1.072	0.500	-
3 930	662000	DFT-s QPSK	G	100	14.0	13.68	-0.05	Rear	0	1	137	1:1	5	0.508	1.076	0.547	B27
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.02	Rear	0	135	69	1:1	5	0.506	1.054	0.533	-
3 930	662000	DFT-s QPSK	G	100	14.0	13.76	0.03	Rear	0	135	69	1:1	5	0.421	1.057	0.445	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.74	-0.09	Rear	0	270	0	1:1	5	0.425	1.062	0.451	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.07	Front	0	1	271	1:1	5	0.042	1.072	0.045	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.19	Front	0	135	69	1:1	5	0.074	1.054	0.078	-
3 930	662000	CP QPSK	G	100	14.0	13.67	0.02	Rear	0	1	1	1:1	5	0.503	1.079	0.543	-
3 500.01	633334	DFT-s QPSK	G	100	14.0	13.18	0.03	Rear	0	1	271	1:1	5	0.471	1.208	0.569	-
3 500.01	633334	DFT-s QPSK	G	100	14.0	13.27	0.04	Rear	0	135	138	1:1	5	0.469	1.183	0.555	-
3 624.99	641666	DFT-s QPSK	I	100	10.0	9.97	-0.10	Rear	0	1	137	1:1	5	0.105	1.007	0.106	-
3 624.99	641666	DFT-s QPSK	I	100	10.0	9.97	-0.18	Front	0	1	137	1:1	5	0.042	1.007	0.042	-
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.17	Rear	0	1	137	1:1	5	0.053	1.002	0.053	-
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.11	Front	0	1	137	1:1	5	0.034	1.002	0.034	-
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	-0.10	Rear	0	1	137	1:1	5	0.066	1.219	0.080	-
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	0.10	Front	0	1	137	1:1	5	0.004	1.219	0.005	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

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

DTS Bodyworn SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 462	11	802.11b	F	20	1	16.0	15.87	-0.10	Rear	98.6	5	0.457	1.030	1.014	0.477	B28
2 462	11	802.11b	F	20	1	16.0	15.87	-0.11	Front	98.6	5	0.075	1.030	1.014	0.078	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2A Bodyworn SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	0.01	Rear	87.4	5	0.270	1.096	1.144	0.339	B29
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	0.05	Front	87.4	5	0.055	1.096	1.144	0.069	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2C Bodyworn SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	-0.14	Rear	87.4	5	0.133	1.265	1.144	0.193	B30
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	0.05	Front	87.4	5	0.018	1.265	1.144	0.026	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII3 Bodyworn SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	0.06	Rear	87.4	5	0.123	1.038	1.144	0.146	B31
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	0.03	Front	87.4	5	0.012	1.038	1.144	0.014	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII4 Bodyworn SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	-0.07	Rear	87.4	5	0.050	1.334	1.144	0.076	B32
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	0.00	Front	87.4	5	0.007	1.334	1.144	0.011	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

DSS Bodyworn SAR														
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 402	0	DH5	F	20	13	12.73	-0.19	Rear	5	0.209	1.064	1.009	0.224	B33
2 402	0	DH5	F	20	13	12.73	0.00	Front	5	0.027	1.064	1.009	0.029	-
2 402	37	LE 125K 255	F	20	13	11.97	-0.10	Rear	5	0.208	1.268	1.002	0.264	
2 402	37	LE 125K 255	F	20	13	11.97	0.12	Front	5	0.041	1.268	1.002	0.052	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

13.1.3 Hotspot SAR Measurement Considerations

GSM 850 Hotspot SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.10	Rear	1:2.08	5	0.549	1.435	0.788	C1
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.07	Front	1:2.08	5	0.268	1.435	0.385	-
836.6	190	GPRS 4Tx	A	27.0	25.43	0.00	Left	1:2.08	5	0.136	1.435	0.195	-
836.6	190	GPRS 4Tx	A	27.0	25.43	0.06	Right	1:2.08	5	0.207	1.435	0.297	-
836.6	190	GPRS 4Tx	A	27.0	25.43	-0.02	Bottom	1:2.08	5	0.401	1.435	0.575	-
836.6	190	GSM Voice	A	33.0	31.45	-0.18	Rear	1:8.3	5	0.512	1.429	0.732	-
836.6	190	GSM Voice	A	33.0	31.45	-0.01	Front	1:8.3	5	0.286	1.429	0.409	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

GSM1900 Hotspot SAR													
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.10	Rear	1:2.08	5	0.702	1.164	0.817	C2
1 850.2	512	GPRS 4Tx	A	23.5	22.89	-0.07	Rear	1:2.08	5	0.572	1.151	0.658	-
1 909.8	810	GPRS 4Tx	A	23.5	22.40	-0.03	Rear	1:2.08	5	0.557	1.288	0.717	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.12	Front	1:2.08	5	0.374	1.164	0.435	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.04	Left	1:2.08	5	0.192	1.164	0.223	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.18	Right	1:2.08	5	0.058	1.164	0.068	-
1 880	661	GPRS 4Tx	A	23.5	22.84	-0.13	Bottom	1:2.08	5	0.644	1.164	0.750	-
1 880	661	GSM Voice	A	29.5	27.83	-0.19	Rear	1:8.3	5	0.624	1.469	0.917	-
1 880	661	GSM Voice	A	29.5	27.83	-0.02	Front	1:8.3	5	0.328	1.469	0.482	-
1 850.2	512	GSM Voice	A	29.5	27.82	-0.07	Rear	1:8.3	5	0.602	1.472	0.886	-
1 909.8	810	GSM Voice	A	29.5	27.84	-0.03	Rear	1:8.3	5	0.586	1.466	0.859	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 5 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.6	4183	RMC	A	24.5	23.15	-0.02	Rear	5	0.705	1.365	0.962	-
836.6	4183	RMC	A	24.5	23.15	0.10	Front	5	0.328	1.365	0.448	-
836.6	4183	RMC	A	24.5	23.15	0.04	Left	5	0.117	1.365	0.160	-
836.6	4183	RMC	A	24.5	23.15	-0.16	Right	5	0.132	1.365	0.180	-
836.6	4183	RMC	A	24.5	23.15	0.02	Bottom	5	0.104	1.365	0.142	-
826.4	4132	RMC	A	24.5	23.18	-0.06	Rear	5	0.605	1.355	0.820	-
846.6	4233	RMC	A	24.5	23.25	-0.11	Rear	5	0.754	1.334	1.006	C3
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS Band 4 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 732.4	1412	RMC	A	20.0	18.71	-0.11	Rear	5	0.735	1.346	0.989	-
1 712.4	1312	RMC	A	20.0	18.66	-0.16	Rear	5	0.693	1.361	0.943	-
1 752.6	1513	RMC	A	20.0	18.54	0.02	Rear	5	0.803	1.400	1.124	-
1 732.4	1412	RMC	A	20.0	18.71	-0.15	Front	5	0.371	1.346	0.499	-
1 732.4	1412	RMC	A	20.0	18.71	-0.13	Left	5	0.212	1.346	0.285	-
1 732.4	1412	RMC	A	20.0	18.71	-0.15	Right	5	0.075	1.346	0.101	-
1 732.4	1412	RMC	A	20.0	18.71	-0.04	Bottom	5	0.654	1.346	0.880	-
1 752.6	1513	RMC	A	20.0	18.54	0.02	Rear	5	0.807	1.400	1.130	C4
1 712.4	1312	RMC	A	20.0	18.66	0.10	Bottom	5	0.539	1.361	0.734	-
1 752.6	1513	RMC	A	20.0	18.54	0.09	Bottom	5	0.633	1.400	0.886	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram					

UMTS Band 2 Hotspot SAR												
Freq. (MHz)	Ch.	Mode	Ant.	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	9400	RMC	A	20.0	18.91	-0.11	Rear	5	0.853	1.285	1.096	-
1 880	9400	RMC	A	20.0	18.91	-0.17	Front	5	0.466	1.285	0.599	-
1 880	9400	RMC	A	20.0	18.91	-0.06	Left	5	0.233	1.285	0.299	-
1 880	9400	RMC	A	20.0	18.91	-0.04	Right	5	0.073	1.285	0.094	-
1 880	9400	RMC	A	20.0	18.91	-0.06	Bottom	5	0.761	1.285	0.978	-
1 852.4	9262	RMC	A	20.0	18.73	-0.04	Rear	5	0.885	1.340	1.186	C5
1 907.6	9538	RMC	A	20.0	18.81	0.01	Rear	5	0.823	1.315	1.082	-
1 852.4	9262	RMC	A	20.0	18.73	0.13	Bottom	5	0.600	1.340	0.804	-
1 907.6	9538	RMC	A	20.0	18.81	0.10	Bottom	5	0.540	1.315	0.710	-
1 852.4	9262	RMC	A	20.0	18.73	-0.01	Rear	5	0.847	1.340	1.135	-
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 Hotspot SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	18900	QPSK	F	20	19.0	17.22	0.16	Rear	0	1	0	1:1	5	0.243	1.507	0.366	-
1 880	18900	QPSK	F	20	19.0	17.21	0.14	Rear	0	50	0	1:1	5	0.244	1.510	0.368	C6
1 880	18900	QPSK	F	20	19.0	17.22	-0.10	Front	0	1	0	1:1	5	0.124	1.507	0.187	-
1 880	18900	QPSK	F	20	19.0	17.21	-0.13	Front	0	50	0	1:1	5	0.131	1.510	0.198	-
1 880	18900	QPSK	F	20	19.0	17.22	0.00	Left	0	1	0	1:1	5	0.154	1.507	0.232	-
1 880	18900	QPSK	F	20	19.0	17.21	0.10	Left	0	50	0	1:1	5	0.142	1.510	0.214	-
1 880	18900	QPSK	F	20	19.0	17.22	-0.03	Top	0	1	0	1:1	5	0.065	1.507	0.098	-
1 880	18900	QPSK	F	20	19.0	17.21	0.05	Top	0	50	0	1:1	5	0.066	1.510	0.100	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 7 Hotspot SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 510	20850	QPSK	A	20	19.0	17.59	-0.11	Rear	0	1	0	1:1	5	0.506	1.384	0.700	-
2 510	20850	QPSK	A	20	19.0	17.69	0.01	Rear	0	50	25	1:1	5	0.551	1.352	0.745	C7
2 510	20850	QPSK	A	20	19.0	17.59	-0.13	Front	0	1	0	1:1	5	0.252	1.384	0.349	-
2 510	20850	QPSK	A	20	19.0	17.69	-0.10	Front	0	50	25	1:1	5	0.256	1.352	0.346	-
2 510	20850	QPSK	A	20	19.0	17.59	0.18	Left	0	1	0	1:1	5	0.243	1.384	0.336	-
2 510	20850	QPSK	A	20	19.0	17.69	0.11	Left	0	50	25	1:1	5	0.247	1.352	0.334	-
2 510	20850	QPSK	A	20	19.0	17.59	0.05	Right	0	1	0	1:1	5	0.043	1.384	0.060	-
2 510	20850	QPSK	A	20	19.0	17.69	-0.01	Right	0	50	25	1:1	5	0.042	1.352	0.057	-
2 510	20850	QPSK	A	20	19.0	17.59	0.20	Bottom	0	1	0	1:1	5	0.370	1.384	0.512	-
2 510	20850	QPSK	A	20	19.0	17.69	0.19	Bottom	0	50	25	1:1	5	0.372	1.352	0.503	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 12 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
707.5	23095	QPSK	A	10	25.5	24.68	-0.02	Rear	0	1	0	1:1	5	0.688	1.208	0.831	C8
707.5	23095	QPSK	A	10	24.5	23.76	0.00	Rear	1	25	0	1:1	5	0.591	1.186	0.701	-
707.5	23095	QPSK	A	10	24.5	23.83	0.05	Rear	1	50	0	1:1	5	0.651	1.167	0.760	-
707.5	23095	QPSK	A	10	25.5	24.68	0.06	Front	0	1	0	1:1	5	0.444	1.208	0.536	-
707.5	23095	QPSK	A	10	24.5	23.76	-0.14	Front	1	25	0	1:1	5	0.251	1.186	0.298	-
707.5	23095	QPSK	A	10	25.5	24.68	0.00	Left	0	1	0	1:1	5	0.200	1.208	0.242	-
707.5	23095	QPSK	A	10	24.5	23.76	0.02	Left	1	25	0	1:1	5	0.160	1.186	0.190	-
707.5	23095	QPSK	A	10	25.5	24.68	-0.12	Right	0	1	0	1:1	5	0.437	1.208	0.528	-
707.5	23095	QPSK	A	10	24.5	23.76	-0.08	Right	1	25	0	1:1	5	0.338	1.186	0.401	-
707.5	23095	QPSK	A	10	25.5	24.68	0.14	Bottom	0	1	0	1:1	5	0.562	1.208	0.679	-
707.5	23095	QPSK	A	10	24.5	23.76	0.14	Bottom	1	25	0	1:1	5	0.454	1.186	0.538	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 13 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
782	23230	QPSK	A	10	25.0	23.80	0.02	Rear	0	1	0	1:1	5	0.668	1.318	0.880	-
782	23230	QPSK	A	10	24.0	22.99	0.06	Rear	1	25	0	1:1	5	0.567	1.262	0.716	-
782	23230	QPSK	A	10	24.0	23.00	0.03	Rear	1	50	0	1:1	5	0.585	1.259	0.737	-
782	23230	QPSK	A	10	25.0	23.80	0.04	Front	0	1	0	1:1	5	0.343	1.318	0.452	-
782	23230	QPSK	A	10	24.0	22.99	0.15	Front	1	25	0	1:1	5	0.294	1.262	0.371	-
782	23230	QPSK	A	10	25.0	23.80	0.03	Left	0	1	0	1:1	5	0.247	1.318	0.326	-
782	23230	QPSK	A	10	24.0	22.99	-0.01	Left	1	25	0	1:1	5	0.198	1.262	0.250	-
782	23230	QPSK	A	10	25.0	23.80	0.06	Right	0	1	0	1:1	5	0.456	1.318	0.601	-
782	23230	QPSK	A	10	24.0	22.99	0.01	Right	1	25	0	1:1	5	0.357	1.262	0.451	-
782	23230	QPSK	A	10	25.0	23.80	0.12	Bottom	0	1	0	1:1	5	0.698	1.318	0.920	C9
782	23230	QPSK	A	10	24.0	22.99	0.11	Bottom	1	25	0	1:1	5	0.562	1.262	0.709	-
782	23230	QPSK	A	10	24.0	23.00	0.07	Bottom	1	50	0	1:1	5	0.552	1.259	0.695	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 14 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
793	23330	QPSK	A	10	25.0	24.02	-0.01	Rear	0	1	0	1:1	5	0.767	1.253	0.961	C10
793	23330	QPSK	A	10	24.0	23.22	0.03	Rear	1	25	0	1:1	5	0.660	1.197	0.790	-
793	23330	QPSK	A	10	24.0	23.23	0.00	Rear	1	50	0	1:1	5	0.688	1.194	0.821	-
793	23330	QPSK	A	10	25.0	24.02	-0.01	Front	0	1	0	1:1	5	0.442	1.253	0.554	-
793	23330	QPSK	A	10	24.0	23.22	-0.02	Front	1	25	0	1:1	5	0.355	1.197	0.425	-
793	23330	QPSK	A	10	25.0	24.02	0.00	Left	0	1	0	1:1	5	0.261	1.253	0.327	-
793	23330	QPSK	A	10	24.0	23.22	0.03	Left	1	25	0	1:1	5	0.218	1.197	0.261	-
793	23330	QPSK	A	10	25.0	24.02	0.04	Right	0	1	0	1:1	5	0.466	1.253	0.584	-
793	23330	QPSK	A	10	24.0	23.22	0.03	Right	1	25	0	1:1	5	0.398	1.197	0.476	-
793	23330	QPSK	A	10	25.0	24.02	0.12	Bottom	0	1	0	1:1	5	0.751	1.253	0.941	-
793	23330	QPSK	A	10	24.0	23.22	0.11	Bottom	1	25	0	1:1	5	0.618	1.197	0.740	-
793	23330	QPSK	A	10	24.0	23.23	0.08	Bottom	1	50	0	1:1	5	0.419	1.194	0.500	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 25 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 860	26140	QPSK	A	20	20.0	18.19	-0.03	Rear	0	1	49	1:1	5	0.437	1.517	0.663	-
1 860	26140	QPSK	A	20	20.0	18.17	-0.15	Rear	0	50	25	1:1	5	0.432	1.524	0.658	-
1 860	26140	QPSK	A	20	20.0	18.19	-0.10	Front	0	1	49	1:1	5	0.195	1.517	0.296	-
1 860	26140	QPSK	A	20	20.0	18.17	-0.13	Front	0	50	25	1:1	5	0.200	1.524	0.305	-
1 860	26140	QPSK	A	20	20.0	18.19	-0.12	Left	0	1	49	1:1	5	0.119	1.517	0.181	-
1 860	26140	QPSK	A	20	20.0	18.17	-0.12	Left	0	50	25	1:1	5	0.122	1.524	0.186	-
1 860	26140	QPSK	A	20	20.0	18.19	0.18	Right	0	1	49	1:1	5	0.039	1.517	0.059	-
1 860	26140	QPSK	A	20	20.0	18.17	-0.15	Right	0	50	25	1:1	5	0.040	1.524	0.061	-
1 860	26140	QPSK	A	20	20.0	18.19	-0.05	Bottom	0	1	49	1:1	5	0.486	1.517	0.737	C11
1 860	26140	QPSK	A	20	20.0	18.17	-0.17	Bottom	0	50	25	1:1	5	0.483	1.524	0.736	-
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 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
831.5	26865	QPSK	A	15	24.0	22.27	0.12	Rear	0	1	0	1:1	5	0.555	1.489	0.826	-
831.5	26865	QPSK	A	15	24.0	22.29	-0.11	Rear	0	36	0	1:1	5	0.621	1.483	0.921	-
831.5	26865	QPSK	A	15	24.0	22.28	0.12	Rear	0	75	0	1:1	5	0.735	1.486	1.092	C12
831.5	26865	QPSK	A	15	24.0	22.27	-0.01	Front	0	1	0	1:1	5	0.250	1.489	0.372	-
831.5	26865	QPSK	A	15	24.0	22.29	-0.04	Front	0	36	0	1:1	5	0.243	1.483	0.360	-
831.5	26865	QPSK	A	15	24.0	22.27	-0.13	Left	0	1	0	1:1	5	0.123	1.489	0.183	-
831.5	26865	QPSK	A	15	24.0	22.29	0.01	Left	0	36	0	1:1	5	0.120	1.483	0.178	-
831.5	26865	QPSK	A	15	24.0	22.27	-0.19	Right	0	1	0	1:1	5	0.237	1.489	0.353	-
831.5	26865	QPSK	A	15	24.0	22.29	-0.02	Right	0	36	0	1:1	5	0.223	1.483	0.331	-
831.5	26865	QPSK	A	15	24.0	22.27	-0.01	Bottom	0	1	0	1:1	5	0.351	1.489	0.523	-
831.5	26865	QPSK	A	15	24.0	22.29	0.03	Bottom	0	36	0	1:1	5	0.353	1.483	0.523	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 30 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	27710	QPSK	A	10	20.0	18.48	0.00	Rear	0	1	24	1:1	5	0.549	1.419	0.779	C13
2 310	27710	QPSK	A	10	20.0	18.54	0.08	Rear	0	25	24	1:1	5	0.539	1.400	0.755	-
2 310	27710	QPSK	A	10	20.0	18.48	-0.10	Front	0	1	24	1:1	5	0.286	1.419	0.406	-
2 310	27710	QPSK	A	10	20.0	18.54	-0.06	Front	0	25	24	1:1	5	0.285	1.400	0.399	-
2 310	27710	QPSK	A	10	20.0	18.48	0.13	Left	0	1	24	1:1	5	0.264	1.419	0.375	-
2 310	27710	QPSK	A	10	20.0	18.54	0.10	Left	0	25	24	1:1	5	0.266	1.400	0.372	-
2 310	27710	QPSK	A	10	20.0	18.48	0.11	Right	0	1	24	1:1	5	0.104	1.419	0.148	-
2 310	27710	QPSK	A	10	20.0	18.54	0.09	Right	0	25	24	1:1	5	0.103	1.400	0.144	-
2 310	27710	QPSK	A	10	20.0	18.48	0.11	Bottom	0	1	24	1:1	5	0.332	1.419	0.471	-
2 310	27710	QPSK	A	10	20.0	18.54	0.13	Bottom	0	25	24	1:1	5	0.330	1.400	0.462	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE TDD Band 41 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 680	41490	QPSK	A	20	20.0	18.70	0.04	Rear	0	1	0	1:1.58	5	0.768	1.349	1.036	C14
2 506	39750	QPSK	A	20	20.0	18.41	-0.14	Rear	0	1	0	1:1.58	5	0.611	1.442	0.881	-
2 549.5	40185	QPSK	A	20	20.0	18.29	-0.16	Rear	0	1	0	1:1.58	5	0.607	1.483	0.900	-
2592.99	40620	QPSK	A	20	20.0	18.48	0.09	Rear	0	1	0	1:1.58	5	0.649	1.419	0.921	-
2636.5	41055	QPSK	A	20	20.0	18.25	0.11	Rear	0	1	0	1:1.58	5	0.698	1.496	1.044	-
2 680	41490	QPSK	A	20	20.0	18.70	0.15	Rear	0	50	0	1:1.58	5	0.643	1.349	0.867	-
2 506	39750	QPSK	A	20	20.0	18.46	-0.12	Rear	0	50	0	1:1.58	5	0.611	1.426	0.871	-
2549.5	40185	QPSK	A	20	20.0	18.32	0.12	Rear	0	50	0	1:1.58	5	0.589	1.472	0.867	-
2592.99	40620	QPSK	A	20	20.0	18.21	-0.12	Rear	0	50	0	1:1.58	5	0.629	1.510	0.950	-
2636.5	41055	QPSK	A	20	20.0	18.26	0.13	Rear	0	50	0	1:1.58	5	0.681	1.493	1.017	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.11	Rear	0	100	0	1:1.58	5	0.626	1.349	0.844	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.11	Front	0	1	0	1:1.58	5	0.185	1.349	0.250	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.70	Front	0	50	0	1:1.58	5	0.182	1.349	0.246	-
2 680	41490	QPSK	A	20	20.0	18.70	0.12	Left	0	1	0	1:1.58	5	0.175	1.349	0.236	-
2 680	41490	QPSK	A	20	20.0	18.70	0.19	Left	0	50	0	1:1.58	5	0.175	1.349	0.236	-
2 680	41490	QPSK	A	20	20.0	18.70	0.14	Right	0	1	0	1:1.58	5	0.037	1.349	0.050	-
2 680	41490	QPSK	A	20	20.0	18.70	-0.08	Right	0	50	0	1:1.58	5	0.034	1.349	0.046	-
2 680	41490	QPSK	A	20	20.0	18.70	0.08	Bottom	0	1	0	1:1.58	5	0.334	1.349	0.451	-
2 680	41490	QPSK	A	20	20.0	18.70	0.03	Bottom	0	50	0	1:1.58	5	0.331	1.349	0.447	-
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 48 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No
3 603.3	55773	QPSK	G	20	17.0	16.25	0.02	Rear	0	1	0	1:1.58	5	0.347	1.189	0.413	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.08	Rear	0	50	0	1:1.58	5	0.349	1.169	0.408	C15
3 603.3	55773	QPSK	G	20	17.0	16.25	0.01	Front	0	1	0	1:1.58	5	0.045	1.189	0.054	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.06	Front	0	50	0	1:1.58	5	0.045	1.169	0.053	-
3 603.3	55773	QPSK	G	20	17.0	16.25	0.02	Left	0	1	0	1:1.58	5	0.197	1.189	0.234	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.14	Left	0	50	0	1:1.58	5	0.198	1.169	0.231	-
3 603.3	55773	QPSK	G	20	17.0	16.25	0.03	Top	0	1	0	1:1.58	5	0.052	1.189	0.062	-
3 603.3	55773	QPSK	G	20	17.0	16.32	0.01	Top	0	50	0	1:1.58	5	0.051	1.169	0.060	-
Uplink Carrier Aggregation																	
3603.30	55773	QPSK	G	20	17.0	15.75	0.1	Rear	0	1	0	1:1.58	5	0.289	1.334	0.386	-
3583.50	55575	QPSK	G	20					0	1	99						
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

LTE FDD Band 66 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 770	132572	QPSK	A	20	19.0	17.51	-0.09	Rear	0	1	0	1:1	5	0.340	1.409	0.479	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.11	Rear	0	50	49	1:1	5	0.350	1.371	0.480	-
1 770	132572	QPSK	A	20	19.0	17.51	-0.08	Front	0	1	0	1:1	5	0.241	1.409	0.340	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.10	Front	0	50	49	1:1	5	0.248	1.371	0.340	-
1 770	132572	QPSK	A	20	19.0	17.51	-0.11	Left	0	1	0	1:1	5	0.110	1.409	0.155	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.16	Left	0	50	49	1:1	5	0.178	1.371	0.244	-
1 770	132572	QPSK	A	20	19.0	17.51	-0.15	Right	0	1	0	1:1	5	0.044	1.409	0.062	-
1 770	132572	QPSK	A	20	19.0	17.63	-0.14	Right	0	50	49	1:1	5	0.042	1.371	0.058	-
1 770	132572	QPSK	A	20	19.0	17.51	0.19	Bottom	0	1	0	1:1	5	0.382	1.409	0.538	-
1 770	132572	QPSK	A	20	19.0	17.63	0.11	Bottom	0	50	49	1:1	5	0.439	1.371	0.602	C16
1 745	132322	QPSK	F	20	19.0	18.46	0.03	Rear	0	1	0	1:1	5	0.295	1.132	0.334	-
1 745	132322	QPSK	F	20	19.0	18.48	0.04	Rear	0	50	0	1:1	5	0.292	1.127	0.329	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.14	Front	0	1	0	1:1	5	0.284	1.132	0.321	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.20	Front	0	50	0	1:1	5	0.282	1.127	0.318	-
1 745	132322	QPSK	F	20	19.0	18.46	-0.12	Left	0	1	0	1:1	5	0.204	1.132	0.231	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.09	Left	0	50	0	1:1	5	0.197	1.127	0.222	-
1 745	132322	QPSK	F	20	19.0	18.46	0.03	Top	0	1	0	1:1	5	0.171	1.132	0.194	-
1 745	132322	QPSK	F	20	19.0	18.48	-0.05	Top	0	50	0	1:1	5	0.167	1.127	0.188	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 71 Hotspot SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
683	133322	QPSK	A	20	25.0	24.50	-0.05	Rear	0	1	0	1:1	5	0.530	1.122	0.595	-
683	133322	QPSK	A	20	24.0	23.67	0.02	Rear	1	50	0	1:1	5	0.533	1.079	0.575	C17
683	133322	QPSK	A	20	25.0	24.50	-0.05	Front	0	1	0	1:1	5	0.287	1.122	0.322	-
683	133322	QPSK	A	20	24.0	23.67	0.07	Front	1	50	0	1:1	5	0.247	1.079	0.267	-
683	133322	QPSK	A	20	25.0	24.50	0.00	Left	0	1	0	1:1	5	0.183	1.122	0.205	-
683	133322	QPSK	A	20	24.0	23.67	-0.01	Left	1	50	0	1:1	5	0.156	1.079	0.168	-
683	133322	QPSK	A	20	25.0	24.50	0.00	Right	0	1	0	1:1	5	0.376	1.122	0.422	-
683	133322	QPSK	A	20	24.0	23.67	0.02	Right	1	50	0	1:1	5	0.309	1.079	0.333	-
683	133322	QPSK	A	20	25.0	24.50	0.14	Bottom	0	1	0	1:1	5	0.359	1.122	0.403	-
683	133322	QPSK	A	20	24.0	23.67	0.06	Bottom	1	50	0	1:1	5	0.206	1.079	0.222	-
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 2 Hotspot SAR

Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	0.13	Rear	0	1	1	1:1	5	0.152	1.349	0.205	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.06	Rear	0	108	0	1:1	5	0.156	1.346	0.210	C18
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.06	Front	0	1	1	1:1	5	0.154	1.349	0.208	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	0.13	Front	0	108	0	1:1	5	0.151	1.346	0.203	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.10	Left	0	1	1	1:1	5	0.125	1.349	0.169	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	-0.06	Left	0	108	0	1:1	5	0.131	1.346	0.176	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.70	-0.10	Top	0	1	1	1:1	5	0.053	1.349	0.071	-
1 880	376000	DFT-s QPSK	F	40	19.0	17.71	-0.14	Top	0	108	0	1:1	5	0.053	1.346	0.071	-
1 880	376000	CP QPSK	F	40	19.0	17.60	-0.14	Rear	0	1	1	1:1	5	0.153	1.380	0.211	-
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 5 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.01	Rear	0	1	104	1:1	5	0.751	1.432	1.075	C19
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	0.07	Rear	0	50	28	1:1	5	0.650	1.413	0.918	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.46	-0.08	Rear	0	100	0	1:1	5	0.562	1.426	0.801	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.04	Front	0	1	104	1:1	5	0.320	1.432	0.458	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	-0.10	Front	0	50	28	1:1	5	0.245	1.413	0.346	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.05	Left	0	1	104	1:1	5	0.124	1.432	0.178	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	-0.03	Left	0	50	28	1:1	5	0.143	1.413	0.202	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	-0.02	Right	0	1	104	1:1	5	0.200	1.432	0.286	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	-0.05	Right	0	50	28	1:1	5	0.183	1.413	0.259	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.44	0.02	Bottom	0	1	104	1:1	5	0.531	1.432	0.760	-
836.5	167300	DFT-s QPSK	A	20	24.0	22.50	-0.05	Bottom	0	50	28	1:1	5	0.510	1.413	0.721	-
836.5	167300	CP QPSK	A	20	24.0	22.44	-0.06	Rear	0	1	1	1:1	5	0.703	1.432	1.007	-
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 25 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	-0.03	Rear	0	1	108	1:1	5	0.587	1.462	0.858	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	-0.10	Rear	0	108	0	1:1	5	0.627	1.531	0.960	C20
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.20	-0.06	Rear	0	216	0	1:1	5	0.610	1.514	0.924	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	-0.02	Front	0	1	108	1:1	5	0.208	1.462	0.304	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	0.05	Front	0	108	0	1:1	5	0.210	1.531	0.322	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	-0.08	Left	0	1	108	1:1	5	0.098	1.462	0.143	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	-0.09	Left	0	108	0	1:1	5	0.100	1.531	0.153	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	0.10	Right	0	1	108	1:1	5	0.026	1.462	0.038	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	-0.06	Right	0	108	0	1:1	5	0.040	1.531	0.061	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.35	0.05	Bottom	0	1	108	1:1	5	0.317	1.462	0.463	-
1 882.5	376500	DFT-s QPSK	A	40	20.0	18.15	0.11	Bottom	0	108	0	1:1	5	0.327	1.531	0.501	-
1 882.5	376500	CP QPSK	A	40	20.0	18.19	0.08	Rear	0	1	1	1:1	5	0.618	1.517	0.938	-
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 30 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	-0.19	Rear	0	1	1	1:1	5	0.545	1.324	0.722	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	-0.14	Rear	0	25	0	1:1	5	0.624	1.334	0.832	C21
2 310	462000	DFT-s QPSK	A	10	20.0	18.72	0.05	Rear	0	50	0	1:1	5	0.604	1.343	0.811	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	-0.14	Front	0	1	1	1:1	5	0.347	1.324	0.459	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	-0.18	Front	0	25	0	1:1	5	0.347	1.334	0.463	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	0.13	Left	0	1	1	1:1	5	0.314	1.324	0.416	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	0.17	Left	0	25	0	1:1	5	0.272	1.334	0.363	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	0.14	Right	0	1	1	1:1	5	0.076	1.324	0.101	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	0.07	Right	0	25	0	1:1	5	0.087	1.334	0.116	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.78	0.14	Bottom	0	1	1	1:1	5	0.594	1.324	0.786	-
2 310	462000	DFT-s QPSK	A	10	20.0	18.75	0.10	Bottom	0	25	0	1:1	5	0.585	1.334	0.780	-
2 310	462000	CP QPSK	A	10	20.0	18.80	0.03	Rear	0	1	1	1:1	5	0.525	1.318	0.692	-
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 41 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	-0.02	Rear	0	1	1	1:1	5	0.306	1.377	0.421	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	-0.11	Rear	0	135	0	1:1	5	0.198	1.419	0.281	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	-0.19	Front	0	1	1	1:1	5	0.106	1.377	0.146	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	-0.13	Front	0	135	0	1:1	5	0.112	1.419	0.159	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	0.18	Left	0	1	1	1:1	5	0.031	1.377	0.043	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	0.13	Left	0	135	0	1:1	5	0.044	1.419	0.062	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	0.16	Right	0	1	1	1:1	5	0.031	1.377	0.043	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	-0.04	Right	0	135	0	1:1	5	0.00822	1.419	0.012	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.61	0.12	Bottom	0	1	1	1:1	5	0.281	1.377	0.387	-
2 592.99	518598	DFT-s QPSK	A	100	18.0	16.48	0.14	Bottom	0	135	0	1:1	5	0.101	1.419	0.143	-
2 592.99	518598	CP QPSK	A	100	18.0	16.66	-0.11	Rear	0	1	1	1:1	5	0.474	1.361	0.645	C22
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 48 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	0.01	Rear	0	1	53	1:1	5	0.374	1.294	0.484	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	0.04	Rear	0	50	0	1:1	5	0.333	1.268	0.422	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	-0.04	Front	0	1	53	1:1	5	0.041	1.294	0.053	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	0.00	Front	0	50	0	1:1	5	0.039	1.268	0.049	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	0.02	Left	0	1	53	1:1	5	0.274	1.294	0.355	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	-0.03	Left	0	50	0	1:1	5	0.271	1.268	0.344	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.88	0.02	Top	0	1	53	1:1	5	0.056	1.294	0.072	-
3 624.99	641666	DFT-s QPSK	G	40	15.0	13.97	-0.11	Top	0	50	0	1:1	5	0.056	1.268	0.071	-
3 624.99	641666	CP QPSK	G	40	15.0	13.93	0.11	Rear	0	1	1	1:1	5	0.485	1.279	0.620	C23
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.03	Rear	0	1	53	1:1	5	0.132	1.186	0.157	-
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.02	Front	0	1	53	1:1	5	0.040	1.186	0.047	-
3 624.99	641666	DFT-s QPSK	I	40	10.0	9.26	0.03	Top	0	1	53	1:1	5	0.083	1.186	0.098	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.02	Rear	0	1	53	1:1	5	0.053	1.291	0.068	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.12	Front	0	1	53	1:1	5	0.064	1.291	0.083	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	0.01	Left	0	1	53	1:1	5	0.000	1.291	0.000	-
3 624.99	641666	DFT-s QPSK	F	40	15.0	13.89	-0.08	Top	0	1	53	1:1	5	0.056	1.291	0.072	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.01	Rear	0	1	53	1:1	5	0.134	1.138	0.152	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.02	Front	0	1	53	1:1	5	0.000	1.138	0.000	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	0.03	Right	0	1	53	1:1	5	0.085	1.138	0.097	-
3 624.99	641666	DFT-s QPSK	H	40	10.0	9.44	-0.07	Top	0	1	53	1:1	5	0.000	1.138	0.000	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

Note : Ant I, F, H SRS was tested with DFT-s OFDM QPSK 1RB 53offset as CW was the Limitation of the manufacturer's S/W tool setup.

NR FDD Band 66 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	0.01	Rear	0	1	108	1:1	5	0.344	1.455	0.501	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	-0.08	Rear	0	108	0	1:1	5	0.365	1.469	0.536	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	-0.04	Front	0	1	108	1:1	5	0.212	1.455	0.308	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	0.09	Front	0	108	0	1:1	5	0.197	1.469	0.289	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	-0.13	Left	0	1	108	1:1	5	0.105	1.455	0.153	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	-0.03	Left	0	108	0	1:1	5	0.094	1.469	0.138	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	-0.02	Right	0	1	108	1:1	5	0.046	1.455	0.067	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	-0.06	Right	0	108	0	1:1	5	0.047	1.469	0.069	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.37	0.09	Bottom	0	1	108	1:1	5	0.309	1.455	0.450	-
1 745	349000	DFT-s QPSK	A	40	19.0	17.33	0.06	Bottom	0	108	0	1:1	5	0.291	1.469	0.427	-
1 745	349000	CP QPSK	A	40	19.0	17.07	-0.10	Rear	0	1	1	1:1	5	0.390	1.560	0.608	C24
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	0.09	Rear	0	1	1	1:1	5	0.246	1.312	0.323	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	0.15	Rear	0	108	0	1:1	5	0.244	1.309	0.319	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.19	Front	0	1	1	1:1	5	0.219	1.312	0.287	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	0.01	Front	0	108	0	1:1	5	0.215	1.309	0.281	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.08	Left	0	1	1	1:1	5	0.163	1.312	0.214	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	-0.02	Left	0	108	0	1:1	5	0.161	1.309	0.211	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.82	-0.14	Top	0	1	1	1:1	5	0.098	1.312	0.129	-
1 745	349000	DFT-s QPSK	F	40	19.0	17.83	-0.06	Top	0	108	0	1:1	5	0.100	1.309	0.131	-
1 745	349000	CP QPSK	F	40	19.0	17.72	0.05	Rear	0	1	1	1:1	5	0.250	1.343	0.336	-
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 70 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	-0.03	Rear	0	1	77	1:1	5	0.618	1.535	0.949	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.02	Rear	0	36	22	1:1	5	0.607	1.507	0.915	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.23	-0.19	Rear	0	75	0	1:1	5	0.773	1.503	1.162	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	-0.03	Front	0	1	77	1:1	5	0.311	1.535	0.477	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.04	Front	0	36	22	1:1	5	0.307	1.507	0.463	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	-0.04	Left	0	1	77	1:1	5	0.149	1.535	0.229	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.08	Left	0	36	22	1:1	5	0.109	1.507	0.164	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	0.12	Right	0	1	77	1:1	5	0.071	1.535	0.109	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.07	Right	0	36	22	1:1	5	0.077	1.507	0.116	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.14	0.15	Bottom	0	1	77	1:1	5	0.538	1.535	0.826	-
1 702.5	340500	DFT-s QPSK	A	15	22.0	20.22	0.11	Bottom	0	36	22	1:1	5	0.633	1.507	0.954	-
1 702.5	340500	CP QPSK	A	15	22.0	20.28	0.00	Rear	0	1	1	1:1	5	0.792	1.486	1.177	C25
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 71 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.06	Rear	0	1	53	1:1	5	0.694	1.146	0.795	C26
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.01	Rear	0	50	28	1:1	5	0.635	1.183	0.751	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.02	Front	0	1	53	1:1	5	0.242	1.146	0.277	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.02	Front	0	50	28	1:1	5	0.218	1.183	0.258	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.04	Left	0	1	53	1:1	5	0.208	1.146	0.238	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	0.09	Left	0	50	28	1:1	5	0.200	1.183	0.237	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.00	Right	0	1	53	1:1	5	0.000	1.146	0.000	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	0.00	Right	0	50	28	1:1	5	0.000	1.183	0.000	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.41	0.01	Bottom	0	1	53	1:1	5	0.426	1.146	0.488	-
680.5	136100	DFT-s QPSK	A	20	25.0	24.27	-0.03	Bottom	0	50	28	1:1	5	0.412	1.183	0.487	-
680.5	136100	CP QPSK	A	20	23.5	22.48	0.01	Rear	1.5	1	1	1:1	5	0.426	1.265	0.539	-
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 77 Hotspot SAR																	
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	MPR (dB)	RB Size	RB offset	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Reported SAR (W/kg)	Plot No.
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.01	Rear	0	1	271	1:1	5	0.466	1.072	0.500	-
3 930	662000	DFT-s QPSK	G	100	14.0	13.68	-0.05	Rear	0	1	137	1:1	5	0.508	1.076	0.547	C27
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.02	Rear	0	135	69	1:1	5	0.506	1.054	0.533	-
3 930	662000	DFT-s QPSK	G	100	14.0	13.76	0.03	Rear	0	135	69	1:1	5	0.421	1.057	0.445	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.74	-0.09	Rear	0	270	0	1:1	5	0.425	1.062	0.451	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.07	Front	0	1	271	1:1	5	0.042	1.072	0.045	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.19	Front	0	135	69	1:1	5	0.074	1.054	0.078	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.01	Left	0	1	271	1:1	5	0.232	1.072	0.249	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.03	Left	0	135	69	1:1	5	0.281	1.054	0.296	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.70	0.02	Top	0	1	271	1:1	5	0.056	1.072	0.060	-
3 750	650000	DFT-s QPSK	G	100	14.0	13.77	0.02	Top	0	135	69	1:1	5	0.064	1.054	0.067	-
3 930	662000	CP QPSK	G	100	14.0	13.67	0.02	Rear	0	1	1	1:1	5	0.503	1.079	0.543	-
3 500.01	633334	DFT-s QPSK	G	100	14.0	13.18	0.03	Rear	0	1	271	1:1	5	0.471	1.208	0.569	DoD
3 500.01	633334	DFT-s QPSK	G	100	14.0	13.27	0.04	Rear	0	135	138	1:1	5	0.469	1.183	0.555	DoD
3 624.99	641666	DFT-s QPSK	I	100	10.0	9.97	-0.10	Rear	0	1	137	1:1	5	0.105	1.007	0.106	-
3 624.99	641666	DFT-s QPSK	I	100	10.0	9.97	-0.18	Front	0	1	137	1:1	5	0.042	1.007	0.042	-
3 624.99	641666	DFT-s QPSK	I	100	10.0	9.97	-0.02	Top	0	1	137	1:1	5	0.105	1.007	0.106	-
3 500.01	633334	DFT-s QPSK	I	100	10.0	8.11	0.03	Rear	0	1	137	1:1	5	0.187	1.545	0.289	DoD
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.17	Rear	0	1	137	1:1	5	0.053	1.002	0.053	-
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.11	Front	0	1	137	1:1	5	0.034	1.002	0.034	-
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.12	Left	0	1	137	1:1	5	0.011	1.002	0.011	-
3 624.99	641666	DFT-s QPSK	F	100	14.0	13.99	-0.04	Top	0	1	137	1:1	5	0.065	1.002	0.065	-
3 500.01	633334	DFT-s QPSK	F	100	14.0	13.36	0.02	Top	0	1	137	1:1	5	0.102	1.159	0.118	DoD
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	-0.10	Rear	0	1	137	1:1	5	0.066	1.219	0.080	-
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	0.10	Front	0	1	137	1:1	5	0.004	1.219	0.005	-
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	-0.14	Right	0	1	137	1:1	5	0.050	1.219	0.061	-
3 624.99	641666	DFT-s QPSK	H	100	10.0	9.14	0.01	Top	0	1	137	1:1	5	0.000	1.219	0.000	-
3 500.01	633334	DFT-s QPSK	H	100	10.0	9.03	0.03	Rear	0	1	137	1:1	5	0.200	1.250	0.250	DoD
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram								

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

DTS Hotspot SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 462	11	802.11b	F	20	1	16.0	15.87	-0.10	Rear	98.6	5	0.457	1.030	1.014	0.477	C28
2 462	11	802.11b	F	20	1	16.0	15.87	-0.11	Front	98.6	5	0.075	1.030	1.014	0.078	-
2 462	11	802.11b	F	20	1	16.0	15.87	0.11	Left	98.6	5	0.046	1.030	1.014	0.048	-
2 462	11	802.11b	F	20	1	16.0	15.87	0.03	Top	98.6	5	0.239	1.030	1.014	0.250	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2A Hotspot SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	0.01	Rear	87.4	5	0.270	1.096	1.144	0.339	C29
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	0.05	Front	87.4	5	0.055	1.096	1.144	0.069	-
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	0.15	Left	87.4	5	0.004	1.096	1.144	0.005	-
5 290	58	802.11ac	F	80	MCS0	10.0	9.60	-0.18	Top	87.4	5	0.194	1.096	1.144	0.243	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII2C Hotspot SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	-0.14	Rear	87.4	5	0.133	1.265	1.144	0.193	C30
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	0.05	Front	87.4	5	0.018	1.265	1.144	0.026	-
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	0.07	Left	87.4	5	0.014	1.265	1.144	0.020	-
5 610	122	802.11ac	F	80	MCS0	10.0	8.98	0.09	Top	87.4	5	0.091	1.265	1.144	0.132	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII3 Hotspot SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	0.06	Rear	87.4	5	0.123	1.038	1.144	0.146	C31
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	0.03	Front	87.4	5	0.012	1.038	1.144	0.014	-
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	0.04	Left	87.4	5	0.011	1.038	1.144	0.013	-
5 775	155	802.11ac	F	80	MCS0	10.0	9.84	-0.01	Top	87.4	5	0.098	1.038	1.144	0.116	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram							

UNII4 Hotspot SAR																
Frequency (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	-0.07	Rear	87.4	5	0.050	1.334	1.144	0.076	-
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	0.00	Front	87.4	5	0.007	1.334	1.144	0.011	-
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	-0.10	Left	87.4	5	0.003	1.334	1.144	0.005	-
5 855	171	802.11ac	F	80	MCS0	10.0	8.75	-0.07	Top	87.4	5	0.062	1.334	1.144	0.095	C32
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 (MHz)	Ch.	Mode	Ant.	Band Width (MHz)	Tune- Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Distance	Meas. 1g SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
2 402	0	DH5	F	20	13	12.73	-0.19	Rear	5	0.209	1.064	1.009	0.224	C33
2 402	0	DH5	F	20	13	12.73	0.00	Front	5	0.027	1.064	1.009	0.029	-
2 402	0	DH5	F	20	13	12.73	0.14	Left	5	0.013	1.064	1.009	0.014	-
2 402	0	DH5	F	20	13	12.73	0.12	Top	5	0.100	1.064	1.009	0.107	-
2 402	37	LE 125K 255	F	20	13	11.97	-0.10	Rear	5	0.208	1.268	1.002	0.264	
2 402	37	LE 125K 255	F	20	13	11.97	0.12	Front	5	0.041	1.268	1.002	0.052	-
2 402	37	LE 125K 255	F	20	13	11.97	0.16	Left	5	0.016	1.268	1.002	0.020	-
2 402	37	LE 125K 255	F	20	13	11.97	0.15	Top	5	0.079	1.268	1.002	0.100	-
ANSI/ IEEE C95.1 - 2005- Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

13.1.4 Phablet SAR Measurement Considerations

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

13.1.5 Phablet SAR Measurement Results

NFC Phablet SAR _10g							
Freq. (MHz)	Mode	Data Rate (Kbps)	Power Drift (dB)	Test Position	Distance (mm)	Meas. 10g SAR (W/Kg)	Plot No.
13.56	NFC (Type A)	106	0.01	Rear	0	0.023	-
13.56	NFC (Type B)	106	0.03	Rear	0	0.024	-
13.56	NFC (Type F)	106	-0.13	Rear	0	0.029	D1
13.56	NFC (Type F)	106	0.00	Front	0	0.000	-
13.56	NFC (Type F)	106	0.00	Left	0	0.000	-
13.56	NFC (Type F)	106	0.00	Top	0	0.000	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population			Hand 4.0 W/kg Averaged over 10 gram				

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 A and AG1 having 4 antennas (F, G, H, I). The conditions are verified through the following criteria.

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

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

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

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

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

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

AG0	
Ant.A	GSM 850, GSM 1900 / UMTS Band 2, UMTS Band 4, UMTS Band 5/ LTE Band 7, LTE Band 12, LTE Band 13, LTE Band 14, LTE Band 25, LTE Band 41, LTE Band 26, LTE Band 30, LTE Band 66, LTE Band 71 / NR Band n5, NR Band n25, NR Band n30, NR Band n41, NR Band n66, NR Band n70, NR Band n71

AG1	
Ant.F	LTE Band 2, LTE Band 66 NR Band n2, NR Band n66, NR Band n48 SRS3, NR Band n77 SRS3, n77 DoD SRS3
Ant.G	LTE Band 48 NR Band n48, NR Band n77, NR Band n77 DoD
Ant.I	NR Band n48 SRS2, NR Band n77 SRS2, n77 DoD SRS2
Ant.H	NR Band n48 SRS4, NR Band n77 SRS4, NR Band n77 DoD SRS4

WLAN/BT	
Ant.F	WLAN 2.4GHz, WLAN 5GHz, Bluetooth

NFC	
NFC	

14.2 Head SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0		
Position	Ant A	Max.AG0
Left Touch	0.576	0.576
Left Tilt	0.261	0.261
Right Touch	0.303	0.303
Right Tilt	0.294	0.294

The Maximum measurement result for AG1					
Position	Ant.F	Ant.G	Ant.I	Ant.H	Max.AG1
Left Touch	0.375	0.097	0.050	0.071	0.375
Left Tilt	0.283	0.087	0.048	0.061	0.283
Right Touch	0.731	0.306	0.075	0.011	0.731
Right Tilt	0.422	0.185	0.079	0.011	0.422

The measurement result for WLAN/BT				
Position	WLAN 2.4GHz Ant.F	WLAN 5GHz Ant.F	Bluetooth Ant.F	WLAN 5GHz+BT
Left Touch	0.271	0.442	0.085	0.527
Left Tilt	0.299	0.539	0.113	0.652
Right Touch	0.281	0.396	0.091	0.487
Right Tilt	0.301	0.635	0.103	0.738

Simultaneous Transmission analysis for Head SAR				
Position	AG0+AG1+WLAN2.4GHz	AG0+AG1+BT	AG0+AG1+ WLAN5GHz	AG0+AG1+WLAN5GHz+BT
Left Touch	1.222	1.036	1.393	1.478
Left Tilt	0.843	0.657	1.083	1.196
Right Touch	1.315	1.125	1.430	1.521
Right Tilt	1.017	0.819	1.351	1.454

14.3 Hotspot/BodyWorn SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0		
Position	Ant A	Max.AG0
Rear	1.186	1.186
Front	0.599	0.599
Left	0.416	0.416
Right	0.601	0.601
Top		
Bottom	0.978	0.978

The Maximum measurement result for AG1					
Position	Ant.F	Ant.G	Ant.I	Ant.H	Max.AG1
Rear	0.368	0.620	0.289	0.250	0.620
Front	0.321	0.078	0.047	0.005	0.321
Left	0.232	0.355			0.355
Right				0.097	0.097
Top	0.194	0.072	0.106		0.194
Bottom					

The measurement result for WLAN/BT				
Position	WLAN 2.4GHz Ant.F	WLAN 5GHz Ant.F	Bluetooth Ant.F	WLAN 5GHz+BT
Rear	0.477	0.339	0.264	0.603
Front	0.078	0.069	0.052	0.121
Left	0.048	0.020	0.020	0.040
Right				
Top	0.250	0.243	0.107	0.350
Bottom				

Simultaneous Transmission analysis for Body SAR				
Position	AG0+AG1+WLAN2.4GHz	AG0+AG1 +BT	AG0+AG1+WLAN5GHz	AG0+AG1+WLAN5GHz+BT
Rear	Sec 14.6.1.1	Sec 14.6.1.2	Sec 14.6.1.2	Sec 14.6.1.2
Front	0.998	0.972	0.989	1.041
Left	0.819	0.791	0.791	0.811
Right	0.698	0.698	0.698	0.698
Top	0.444	0.301	0.437	0.544
Bottom	0.978	0.978	0.978	0.978

14.4 Phablet SAR Simultaneous Transmission Analysis

Position	NFC	Worst
Rear	0.029	0.029
Front	0.000	0.000
Left	0.000	0.000
Right		
Top	0.000	0.000
Bottom		

14.5 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:

SAR_1 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

SAR_2 is the highest measured or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

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

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

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

14.6 Sum-Peak Location Separation Ratio

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

Test Procedure:

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

14.6.1 Hotspot/BodyWorn(Rear) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM850	Ant A	-2	79.5	-205	0.788
GSM1900	Ant A	-32.6	87.6	-206	0.917
UMTS B5	Ant A	8.5	73.5	-205	1.006
UMTS B4	Ant A	-33.5	81.0	-206	1.130
UMTS B2	Ant A	-32	81.0	-206	1.186
LTE Band 7	Ant A	-51.4	68.6	-212	0.745
LTE Band 12	Ant A	8.5	76.5	-205	0.831
LTE Band 13	Ant A	8.5	76.5	-205	0.880
LTE Band 14	Ant A	10	75.0	-205	0.961
LTE Band 25	Ant A	-35	73.5	-206	0.663
LTE Band 26	Ant A	13	73.5	-205	1.092
LTE Band 30	Ant A	-49	68.6	-212	0.779
LTE Band 41	Ant A	-49	71.0	-208	1.044
LTE Band 66	Ant A	-29	73.5	-206	0.480
LTE Band 71	Ant A	-3.5	85.5	-205	0.595
NR n5	Ant A	8.5	75.0	-205	1.075
NR n25	Ant A	-35	72.0	-207	0.960
NR n71	Ant A	10	73.5	-204	0.795
NR n30	Ant A	-50.2	72.0	-208	0.832
NR n66	Ant A	-35	72.0	-207	0.608
NR n41	Ant A	-49	75.0	-208	0.645
NR n70	Ant A	-48.5	72.0	-207	1.177

Ant Group 1

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE Band 2	Ant F	-42.5	-70.5	-205	0.368
LTE Band 66	Ant F	-39.5	-69.0	-206	0.334
NR n2	Ant F	-36.5	-74.0	-206	0.211
NR n66	Ant F	-35	-77.5	-207	0.336
NR n48 SRS3	Ant F	-45.5	-74.5	-207	0.068
NR n77 SRS3	Ant F	-45.1	-76.0	-207	0.053
LTE Band 48	Ant G	-58	-62.5	-207	0.413
NR n48	Ant G	-65.4	-62.4	-207	0.620
NR n77	Ant G	-58.8	-61.2	-207	0.569
NR n48 SRS2	Ant I	-13.5	-68.0	-207	0.157
NR n77 SRS2	Ant I	-13.5	-68.0	-207	0.289
NR n48 SRS4	Ant H	17	-48.5	-207	0.152
NR n77 SRS4	Ant H	16.5	-49.5	-207	0.250

WLAN/BT

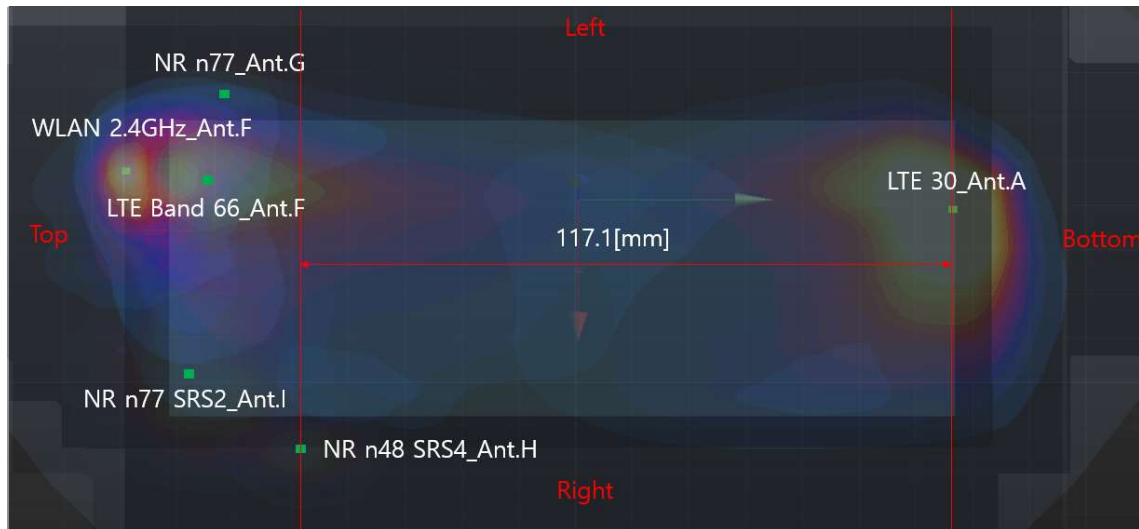
Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
WLAN2.4GHz	Ant F	-41.8	-89.8	-208	0.477
WLAN5GHz	Ant F	-35.7	-79.6	-207	0.339
BT	Ant F	-38.2	-79.8	-208	0.264

14.6.1.1 Group analysis SPLSR AG0 + AG1 + WLAN 2.4GHz

	AG0	AG1	WLAN 2.4GHz
Min Y-axis(mm)	68.6		
Max SAR(W/kg)	1.186		
Max Y-axis(mm)		-48.5	-89.8
Max SAR(W/kg)		0.620	0.477
AG0, (AG1, WLAN2.4 GHz) Distance(mm)		117.1	
(AG1+WLAN 2.4 GHz) SAR(W/kg)		1.097	
(AG0+AG1+WLAN 2.4 GHz) SAR(W/kg)		2.283	
AG0, AG1+WLAN 2.4GHz (SPLSR)		0.029	

SPLSR Plot for AG0 + AG1 + WLAN 2.4GHz

AG0 + AG1 + WLAN 2.4GHz

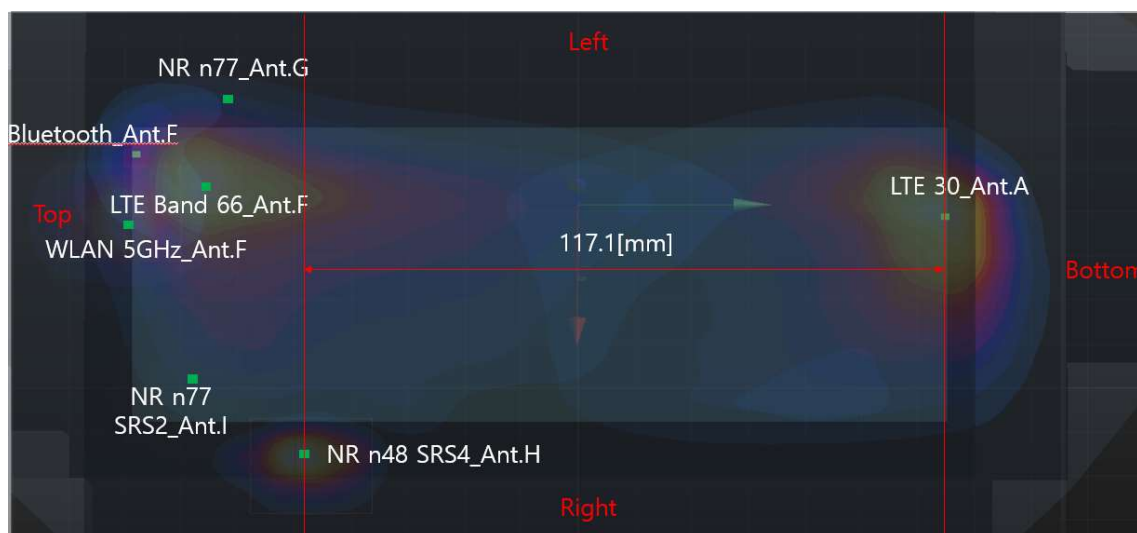


14.6.1.2 Group analysis SPLSR AG0 + AG1 + WLAN 5GHz + BT

	AG0	AG1	WLAN 5GHz+BT
Min Y-axis(mm)	68.6		
Max SAR(W/kg)	1.186		
Max Y-axis(mm)		-48.5	-79.6
Max SAR(W/kg)		0.620	0.603
AG0, (AG1, WLAN/BT) Distance(mm)		117.1	
(AG1+5 GHz WLAN+BT) SAR(W/kg)		1.223	
AG0+(AG1+5 GHz WLAN+BT) SAR(W/kg)		2.409	
AG0, (AG1+5 GHz WLAN+BT)(SPLSR)		0.032	

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

AG0 + AG1 + WLAN 5GHz + BT



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 .

Body SAR measurement variability Results

Frequency		Mode,Band/Configuration	Position	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
1 852.4	9262	UMTS Band 2 / RMC	Rear	0.885	0.847	1.04
1752.6	1513	UMTS Band 4 / RMC	Rear	0.803	0.807	1.00

BodySAR measurement variability Results

Frequency		Mode,Band/Configuration	Position	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
1 852.4	9262	UMTS Band 2 / RMC	Rear	0.885	0.847	1.04
1752.6	1513	UMTS Band 4 / RMC	Rear	0.803	0.807	1.00

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 List

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
SPEAG	cDASY6 5G Module Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59RAA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	TX90 Lspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F17/ 59RAA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	011578	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0008	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331953309	01/16/2025	Annual	01/16/2026
TESTO	175-H1/Thermometer	40331922309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	40331949309	12/26/2024	Annual	12/26/2025
SPEAG	DAE4	1686	06/05/2025	Annual	06/05/2026
SPEAG	DAE4	1720	04/23/2025	Annual	04/23/2026
SPEAG	DAE4	1417	02/18/2025	Annual	02/18/2026
SPEAG	DAE4	1687	07/15/2025	Annual	07/15/2026
SPEAG	DAE4	446	03/19/2025	Annual	03/19/2026
SPEAG	E-Field Probe EX3DV4	7702	01/21/2025	Annual	01/21/2026
SPEAG	E-Field Probe EX3DV4	3797	01/21/2025	Annual	01/21/2026
SPEAG	E-Field Probe EX3DV4	7370	08/15/2025	Annual	08/15/2026
SPEAG	E-Field Probe EX3DV4	7679	08/19/2025	Annual	08/19/2026
SPEAG	E-Field Probe ES3DV3	3076	07/22/2025	Annual	07/22/2026
SPEAG	E-Field Probe EX3DV4	7680	04/22/2025	Annual	04/22/2026
SPEAG	CLA13	1016	11/19/2024	Annual	11/19/2025
SPEAG	Dipole D750V3	1014	05/20/2025	Annual	05/20/2026
SPEAG	Dipole D835V2	4d165	04/14/2025	Annual	04/14/2026
SPEAG	Dipole D1640V2	345	07/07/2025	Annual	07/07/2026
SPEAG	Dipole D1800V2	2d015	04/17/2025	Annual	04/17/2026
SPEAG	Dipole D1900V2	5d061	01/20/2025	Annual	01/20/2026
SPEAG	Dipole D2300V2	1010	05/19/2025	Annual	05/19/2026
SPEAG	Dipole D2450V2	1049	03/13/2025	Annual	03/13/2026
SPEAG	Dipole D2600V2	1043	05/22/2025	Annual	05/22/2026
SPEAG	Dipole D3500V2	1040	01/16/2025	Annual	01/16/2026
SPEAG	Dipole D3700V2	1105	09/18/2024	Annual	09/18/2025
SPEAG	Dipole D3700V2	1066	09/15/2025	Annual	09/15/2026
SPEAG	Dipole D3900V2	1019	05/21/2025	Annual	05/21/2026
SPEAG	Dipole D5GHzV2	1107	04/19/2024	Biennial	04/19/2026

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	Power Meter E4419B	MY41291386	09/13/2025	Annual	09/13/2026
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Power Meter N1911A	MY45101406	05/19/2025	Annual	05/19/2026
Agilent	Power Sensor 8481A	SG1091286	09/09/2025	Annual	09/09/2026
Agilent	Power Sensor 8481A	SG1091286	09/12/2024	Annual	09/12/2025
H.P	Power Sensor 8481A	MY41090873	01/13/2025	Annual	01/13/2026
Agilent	Wideband Power Sensor N1921A	MY55220026	08/07/2025	Annual	08/07/2026
Agilent	11636B/Power Divider	58698	01/13/2025	Annual	01/13/2026
SPEAG	DAKS 3.5	1038	01/20/2025	Annual	01/20/2026
KEYSIGHT	MXA Signal Analyzer	MY49100108	01/07/2025	Annual	01/07/2026
H.P	Network Analyzer /8753E	JP38451384	08/19/2025	Annual	08/19/2026
Protek	NETWORK ANALYZER	X11-15305	02/10/2025	Annual	02/10/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/15/2025	Annual	09/15/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2025	Annual	07/29/2026
R&S	Wireless Communication Test Set CMW500	115733	03/20/2025	Annual	03/20/2026
R&S	Wireless Communication Test Set CMW500	139333	12/09/2024	Annual	12/09/2025
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/18/2025	Annual	03/18/2026
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/15/2025	Annual	09/15/2026
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-15N	10453	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-30N	-	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-30N	-	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-60N	32011	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-60N	32011	09/15/2025	Annual	09/15/2026
Agilent	Attenuator (3dB) 8693B	MY39260298	08/18/2025	Annual	08/18/2026
HP	Attenuator (20dB) 8493C	09271	08/18/2025	Annual	08/18/2026
RF KOREA	Attenuator (30dB)	A-0830	06/24/2025	Annual	06/24/2026
Agilent	Directional Bridge 86205A	3140A04581	04/18/2025	Annual	04/18/2026
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/09/2025	Annual	06/09/2026
HP	Dual Directional Coupler	16072	09/15/2025	Annual	09/15/2026
HP	Dual Directional Coupler	16072	09/11/2024	Annual	09/11/2025
Anritsu	Radio Communication Test Station MT8000A	6262036812	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Test Station MT8000A	6262148305	12/23/2024	Annual	12/23/2025
Anritsu	Radio Communication Tester MT8820C	6201074225	01/13/2025	Annual	01/13/2026
Anritsu	Radio Communication Tester MT8820C	6200695605	03/21/2025	Annual	03/21/2026
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2025	Annual	05/21/2026
Anritsu	Radio Communication Tester MT8821C	6262044720	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Tester MT8821C	6201664725	01/13/2025	Annual	01/13/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/20/2025	Annual	05/20/2026
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/13/2025	Annual	01/13/2026

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

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

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-2510-FC003-P