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RF Exposure Part 1 Test Report

Applicant Name:
Samsung Electronics Co., Ltd.
129, Samsung-ro, Maetan dong,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:
01/08/2025-02/21/2025
Test Site/Locations:
Element, Columbia, MD, USA
Element, Suwon
Document Serial No.:
1M2501020001-01.A3L (Rev 1)

FCC ID: **A3LSMG766U**

APPLICANT: **SAMSUNG ELECTRONICS CO., LTD.**

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-G766U
Additional Model(s): SM-G766U1

Equipment Class	Band & Mode	Tx Frequency	SAR 1g Head (W/kg)	SAR 1g Body-Worn (W/kg)	SAR 1g Hotspot (W/kg)	SAR 10g Phablet (W/kg)
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	0.28	0.98	0.98	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	0.16	0.95	0.95	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.34	1.00	1.00	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.37	0.89	0.89	N/A
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.49	0.84	0.84	N/A
PCE	LTE Band 71	665.5 - 695.5 MHz	0.21	0.71	0.71	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.22	0.81	0.81	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.17	**1.01**	**1.01**	N/A
PCE	LTE Band 14	790.5 - 795.5 MHz	0.19	1.00	1.00	N/A
PCE	LTE Band 26	814.7 - 848.3 MHz	0.31	0.96	0.96	N/A
PCE	LTE Band 5	824.7 - 848.3 MHz	0.35	0.96	0.96	N/A
PCE	LTE Band 66	1710.7 - 1779.3 MHz	0.63	0.81	0.81	N/A
PCE	LTE Band 4	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 25	1850.7 - 1914.3 MHz	0.55	0.79	0.79	N/A
PCE	LTE Band 2	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 30	2307.5 - 2312.5 MHz	0.57	0.66	0.82	N/A
PCE	LTE Band 7	2502.5 - 2567.5 MHz	0.55	0.83	0.83	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.56	0.60	0.60	N/A
PCE	LTE Band 38	2572.5 - 2617.5 MHz	N/A	N/A	N/A	N/A
CBE	LTE Band 48	3552.5 - 3697.5 MHz	0.31	0.50	0.50	N/A
PCE	NR Band n71	665.5 - 695.5 MHz	0.25	0.80	0.80	N/A
PCE	NR Band n14	790.5 - 795.5 MHz	0.25	0.93	0.93	N/A
PCE	NR Band n5	826.5 - 846.5 MHz	0.44	0.75	0.75	N/A
PCE	NR Band n70	1697.5 - 1707.5 MHz	0.49	0.93	0.93	N/A
PCE	NR Band n66	1712.5 - 1777.5 MHz	0.68	0.70	0.70	N/A
PCE	NR Band n25	1852.5 - 1912.5 MHz	0.79	0.76	0.76	N/A
PCE	NR Band n2	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n30	2307.5 - 2312.5 MHz	**0.81**	0.84	0.87	N/A
PCE	NR Band n41	2501.01 - 2685 MHz	0.10	0.45	0.65	N/A
CBE	NR Band n48	3555 - 3694.98 MHz	**0.59**	**0.93**	**0.93**	N/A
PCE	NR Band n78	3455.01 - 3544.98 MHz; 3705 - 3795 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n77	3455.01 - 3544.98 MHz; 3705 - 3975 MHz	0.71	0.83	0.83	N/A
DTS	2.4 GHz WIFI	2412 - 2462 MHz	**0.30**	**0.31**	**0.31**	N/A
NII	5 GHz WIFI	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz U-NII-4: 5845 - 5885 MHz	**0.32***	**0.71***	**0.36***	**0.50***
6CD	6 GHz WIFI	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6875 MHz U-NII-8: 6895 - 7115 MHz	**0.22***	**0.56***	N/A	**0.42***
DSS	2.4 GHz Bluetooth	2402 - 2480 MHz	**0.15**	**0.19**	**0.19**	**0.44**
DXX	NFC	13.56 MHz	N/A	N/A	N/A	**<0.1**
Simultaneous SAR per KDB 690783 D01v01r03:			**1.59**	**1.59**	1.46	**0.96**

Equipment Class	Band & Mode	Tx Frequency	APD (W/m^2) Head	APD (W/m^2) Body-Worn	APD (W/m^2) Phablet	Reported PD (W/m^2)
6CD	6 GHz WIFI	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6875 MHz U-NII-8: 6895 - 7115 MHz	1.352*	3.582*	**9.932***	7.995*

Note: * SAR Values represent RF Exposure during MIMO operations.

Note: This revised Test Report supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 2.8 of this report; for North American frequency bands only.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.

RJ Ortanez
Executive Vice President

CERT #2041.01

The SAR Tick is an initiative of the Mobile & Wireless Forum (MWF). While a product may be considered eligible, use of the SAR Tick logo requires an agreement with the MWF. Further details can be obtained by emailing: sartick@mwfai.info.

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1 TEST LABORATORY INFORMATION

1.1 Introduction

This test report for device subject to testing at an accredited testing laboratory has been generated by the testing laboratory that tested the device. Measurements were performed at various locations within Element Materials Technology. Detailed location and accredited information regarding the testing laboratories are provided below.

1.2 Test Laboratories Information

1.2.1 Testing Laboratory 1

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY WASHINGTON DC LLC
Test Lab Location	7185 Oakland Mills Road, Columbia, MD 21046, United States Tel. +1.410.290.6652 / Fax +1.410.290.6654
Accreditation Info.	Lab Code. (ISED): 2451B
	CAB Identifier (NIST): US0110
	ISO/IEC 17025 (A2LA): CERT #2041.01
	ilac-MRA A2LA ACCREDITED CERT #2041.01
Measurement System No.	C, E, G, H, J, L, O, P, R, S

1.2.2 Testing Laboratory 2

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY SUWON, LTD.
Test Lab Location	Yongin-si, Gyeonggi-do, 16954, South Korea Tel. +82.31.660.7391 / Fax +82)31-660-7318
Accreditation Info.	Lab Code. (ISED): 26168
	CAB Identifier (NIST): KR0169
	ISO/IEC 17025 (A2LA): CERT #2041.04
	ilac-MRA A2LA ACCREDITED CERT #2041.04
Measurement System No.	K2, K3, K4, K6

Note: For each test performed, the test site can be verified with the probe serial numbers specified in the table of Test System Verification and Equipment List.

2 DEVICE UNDER TEST

2.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26	Voice/Data	814.7 - 848.3 MHz
LTE Band 5	Voice/Data	824.7 - 848.3 MHz
LTE Band 66	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
LTE Band 48	Voice/Data	3552.5 - 3697.5 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n14	Voice/Data	790.5 - 795.5 MHz
NR Band n5	Voice/Data	826.5 - 846.5 MHz
NR Band n70	Voice/Data	1697.5 - 1707.5 MHz
NR Band n66	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2	Voice/Data	1852.5 - 1907.5 MHz
NR Band n30	Voice/Data	2307.5 - 2312.5 MHz
NR Band n41	Voice/Data	2501.01 - 2685 MHz
NR Band n48	Voice/Data	3555 - 3694.98 MHz
NR Band n78	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3795 MHz
NR Band n77	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3975 MHz
2.4 GHz WIFI	Voice/Data	2412 - 2462 MHz
5 GHz WIFI	Voice/Data	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz U-NII-4: 5845 - 5885 MHz
6 GHz WIFI	Voice/Data	U-NII-5: 5935 - 6415 MHz U-NII-6: 6435 - 6515 MHz U-NII-7: 6535 - 6875 MHz U-NII-8: 6895 - 7115 MHz
2.4 GHz Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz

2.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit feature for 2G/3G/4G/5G modes and with the Qualcomm® FastConnect TAS feature for WLAN technologies. This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. Refer to Compliance Summary document for detailed description of Qualcomm® Smart Transmit and Qualcomm® FastConnect TAS features (report SN could be found in Section 2.10 – Bibliography).

Note that Bluetooth and NFC operations are not enabled with TAS.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit (i.e., Plimit for WWAN), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN can be found in Section 2.10 - Bibliography).

The FastConnect TAS algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of SAR_design_target, below the predefined time-averaged power limit (i.e., Plimit for WLAN), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN can be found in Section 2.10 - Bibliography).

Smart Transmit and FastConnect TAS allows 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 EFS for WWAN and Plimit BDF for WLAN settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI). Note that the device uncertainty for WWAN and WLAN is 1.0dB for this EUT.

To differentiate between Antenna Groups (AGs) controlled by Smart Transmit and those controlled by FastConnect, AGs managed by Smart Transmit will be labeled with numbers, while those managed by FastConnect will be labeled with letters. Modes outside of TAS are identified by their respective antennas.

Exposure Scenario			Maximum Tune-Up Output Power*	Body-Worn or Phablet	Head	Hotspot
Averaging Volume				1g/10g	1g	1g
Spacing				5mm, 0mm	0mm	10mm, 5mm
DSI				0	2	3
Technology/Band	Antenna	Antenna Group	P_{max}	P_{limit}	P_{limit}	P_{limit}
GSM 850	1	AG0	24.3	22.5	24.4	22.5
GSM 1900	2	AG0	21.3	19.5	18.5	19.5
UMTS 850	1	AG0	24.0	23.0	24.9	23.0
UMTS 1750	2	AG0	23.5	19.5	23.5	19.5
UMTS 1900	2	AG0	23.5	19.0	23.5	19.0
LTE Band 71	1	AG0	24.0	25.5	24.4	25.5
LTE Band 12	1	AG0	24.0	24.6	24.5	24.6
LTE Band 13	1	AG0	24.0	23.0	26.0	23.0
LTE Band 14	1	AG0	24.0	23.0	26.2	23.0
LTE Band 26	1	AG0	24.0	23.0	25.4	23.0
LTE Band 5	1	AG0	24.0	23.0	26.0	23.0
LTE Band 66/4	2	AG0	23.5	19.0	23.5	19.0
LTE Band 66/4	4	AG1	23.5	21.0	20.5	21.0
LTE Band 25/2	2	AG0	23.5	19.0	23.5	19.0
LTE Band 25/2	4	AG1	23.0	20.0	18.0	20.0
LTE Band 30	2	AG0	23.0	20.5	24.7	20.5
LTE Band 30	4	AG1	23.0	19.0	14.5	19.0
LTE Band 7	2	AG0	23.5	20.5	24.4	20.5
LTE Band 7	4	AG1	23.0	19.5	17.0	19.5
LTE Band 41/38	2	AG0	21.0	17.0	17.0	17.0
LTE Band 41/38	4	AG1	21.0	17.0	15.0	17.0
LTE Band 48	6	AG1	19.0	11.0	14.0	11.0
NR Band n71	1	AG0	24.0	24.9	24.4	24.9
NR Band n14	1	AG0	23.0	22.0	23.7	22.0
NR Band n5	1	AG0	24.0	21.5	24.9	21.5
NR Band n70	2	AG0	23.5	20.5	24.7	20.5
NR Band n70	4	AG1	23.0	20.0	19.0	20.0
NR Band n66	2	AG0	23.5	19.5	23.5	19.5
NR Band n66	4	AG1	23.0	20.5	19.5	20.5
NR Band n25/n2	2	AG0	23.5	20.0	23.6	20.0
NR Band n25/n2	4	AG1	23.5	21.0	17.0	21.0
NR Band n30	2	AG0	23.0	20.5	23.9	20.5
NR Band n30	4	AG1	23.0	19.0	14.5	19.0
NR Band n41 PC3	2	AG0	23.5	17.0	17.0	17.0
NR Band n41 PC2	2	AG0	26.0	17.0	17.0	17.0
NR Band n48	6	AG1	21.0	12.5	14.0	12.5
NR Band n48	8	AG1	16.0	14.0	15.0	14.0
NR Band n48	2	AG0	20.0	15.0	15.0	15.0
NR Band n48	4	AG1	16.0	15.0	15.0	15.0
NR Band n78 PC3	6	AG1	23.0	14.0	15.0	14.0
NR Band n78 PC3	8	AG1	18.0	17.0	17.0	17.0
NR Band n78 PC3	2	AG0	17.0	17.0	17.0	17.0
NR Band n78 PC3	4	AG1	16.0	15.0	15.0	15.0
NR Band n78 PC2	6	AG1	27.0	14.0	15.0	14.0
NR Band n78 PC2	8	AG1	23.0	17.0	17.0	17.0
NR Band n78 PC2	2	AG0	26.0	17.0	17.0	17.0
NR Band n78 PC2	4	AG1	22.0	15.0	15.0	15.0
NR Band n77 PC3	6	AG1	24.0	14.0	15.0	14.0
NR Band n77 PC3	8	AG1	18.0	17.0	17.0	17.0
NR Band n77 PC3	2	AG0	17.0	17.0	17.0	17.0
NR Band n77 PC3	4	AG1	16.0	15.0	15.0	15.0
NR Band n77 PC2	6	AG1	27.0	14.0	15.0	14.0
NR Band n77 PC2	8	AG1	23.0	17.0	17.0	17.0
NR Band n77 PC2	2	AG0	26.0	17.0	17.0	17.0
NR Band n77 PC2	4	AG1	22.0	15.0	15.0	15.0

*Maximum tune up output power P_{max} is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1dB device design uncertainty.

The maximum time-averaged output power (dBm) for any Sub6 WWAN technology, band, and DSI = minimum of "P_{limit} EFS" and "Maximum tune up output power P_{max}" + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06.

Exposure Scenario			Maximum Tune-Up Output Power*	Body-Worn, Hotspot, or Phablet	Head
Averaging Volume				1g/10g	1g
Spacing				5mm, 0mm	0mm
DSI				0	1
Technology/Band	Antenna	Antenna Group	P_{max}	P_{limit}	P_{limit}
2.4 GHz WIFI	5	AGa	17.0	13.0	13.0
2.4 GHz WIFI	MIMO	AGa	17.0	13.0	13.0
5 GHz WIFI	MIMO	AGa	16.0	10.5	10.5
6 GHz WIFI	MIMO	AGa	16.0	10.5	10.5

All MIMO Pmax and Plimit are defined per antenna chain.

The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels.

2.3 Power Reduction for SAR

This device uses an independent fixed level power reduction mechanism for Bluetooth operations during held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

2.4 Nominal and Maximum Output Power Specifications

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

Note: Targets for 802.11ax RU operations can be found in 802.11ax RU SAR Exclusion Appendix.

2.4.1 Licensed Output Power

GSM/GPRS/EDGE 850										
Antenna 1										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in 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	Max Allowed Power	34.0	34.0	31.5	30.0	28.5	27.5	26.0	24.0	23.0
	Nominal	33.0	33.0	30.5	29.0	27.5	26.5	25.0	23.0	22.0
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	33.0	33.0	29.8	28.2	26.9	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	28.8	27.2	25.9	26.5	25.0	23.0	22.0
DSI = 2 (Head)	Max Allowed Power	34.0	34.0	31.5	30.0	28.5	27.5	26.0	24.0	23.0
	Nominal	33.0	33.0	30.5	29.0	27.5	26.5	25.0	23.0	22.0
DSI = 3 (Hotspot)	Max Allowed Power	N/A	33.0	29.8	28.2	26.9	27.5	26.0	24.0	23.0
	Nominal	N/A	32.0	28.8	27.2	25.9	26.5	25.0	23.0	22.0
GSM/GPRS/EDGE 1900										
Antenna 2										
Power Level		Voice (in dBm)	Data - Burst Average GMSK (in dBm)				Data - Burst Average 8-PSK (in 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	Max Allowed Power	31.0	31.0	28.5	27.0	25.0	26.3	25.0	23.2	22.2
	Nominal	30.0	30.0	27.5	26.0	24.0	25.3	24.0	22.2	21.2
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	30.0	30.0	26.9	25.2	23.9	26.3	25.0	23.2	22.2
	Nominal	29.0	29.0	25.9	24.2	22.9	25.3	24.0	22.2	21.2
DSI = 2 (Head)	Max Allowed Power	29.0	29.0	25.8	24.2	22.9	26.3	25.0	23.2	22.2
	Nominal	28.0	28.0	24.8	23.2	21.9	25.3	24.0	22.2	21.2
DSI = 3 (Hotspot)	Max Allowed Power	N/A	30.0	26.9	25.2	23.9	26.3	25.0	23.2	22.2
	Nominal	N/A	29.0	25.9	24.2	22.9	25.3	24.0	22.2	21.2

For GSM, the above powers listed are GSM burst average values.

UMTS Band 5 (850 MHz)					
Antenna 1					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.0	24.5	24.5	24.5
	Nominal	24.0	23.5	23.5	23.5
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	24.0	23.5	23.5	23.5
	Nominal	23.0	22.5	22.5	22.5
DSI = 2 (Head)	Max Allowed Power	25.0	24.5	24.5	24.5
	Nominal	24.0	23.5	23.5	23.5
DSI = 3 (Hotspot)	Max Allowed Power	24.0	23.5	23.5	23.5
	Nominal	23.0	22.5	22.5	22.5
UMTS Band 4 (1750 MHz)					
Antenna 2					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	20.5	19.5	19.5	19.5
	Nominal	19.5	18.5	18.5	18.5
DSI = 2 (Head)	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
DSI = 3 (Hotspot)	Max Allowed Power	20.5	19.5	19.5	19.5
	Nominal	19.5	18.5	18.5	18.5
UMTS Band 2 (1900 MHz)					
Antenna 2					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
DSI = 0 (Body-Worn or Phablet)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 2 (Head)	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
DSI = 3 (Hotspot)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	DSI = 0 (Body-Worn or Phablet)	DSI = 2 (Head)	DSI = 3 (Hotspot)
LTE Band 71	1	Max Allowed Power	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0
LTE Band 12	1	Max Allowed Power	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0
LTE Band 13	1	Max Allowed Power	25.0	24.0	25.0	24.0
		Nominal	24.0	23.0	24.0	23.0
LTE Band 14	1	Max Allowed Power	25.0	24.0	25.0	24.0
		Nominal	24.0	23.0	24.0	23.0
LTE Band 26	1	Max Allowed Power	25.0	24.0	25.0	24.0
		Nominal	24.0	23.0	24.0	23.0
LTE Band 5	1	Max Allowed Power	25.0	24.0	25.0	24.0
		Nominal	24.0	23.0	24.0	23.0
LTE Band 66/4	2	Max Allowed Power	24.5	20.0	24.5	20.0
		Nominal	23.5	19.0	23.5	19.0
LTE Band 66/4	4	Max Allowed Power	24.5	22.0	21.5	22.0
		Nominal	23.5	21.0	20.5	21.0
LTE Band 25/2	2	Max Allowed Power	24.5	20.0	24.5	20.0
		Nominal	23.5	19.0	23.5	19.0
LTE Band 25/2	4	Max Allowed Power	24.0	21.0	19.0	21.0
		Nominal	23.0	20.0	18.0	20.0
LTE Band 30	2	Max Allowed Power	24.0	21.5	24.0	21.5
		Nominal	23.0	20.5	23.0	20.5
LTE Band 30	4	Max Allowed Power	24.0	20.0	15.5	20.0
		Nominal	23.0	19.0	14.5	19.0
LTE Band 7	2	Max Allowed Power	24.5	21.5	24.5	21.5
		Nominal	23.5	20.5	23.5	20.5
LTE Band 7	4	Max Allowed Power	24.0	20.5	18.0	20.5
		Nominal	23.0	19.5	17.0	19.5
LTE Band 41/38	2	Max Allowed Power	24.0	20.0	20.0	20.0
		Nominal	23.0	19.0	19.0	19.0
LTE Band 41/38	4	Max Allowed Power	24.0	20.0	18.0	20.0
		Nominal	23.0	19.0	17.0	19.0
LTE Band 48	6	Max Allowed Power	22.0	14.0	17.0	14.0
		Nominal	21.0	13.0	16.0	13.0

For LTE TDD, the above powers listed are TDD burst average values.

Mode / Band	Antenna		Modulated Average Output Power (in dBm)			
			Pmax	DSI = 0 (Body-Worn or Phablet)	DSI = 2 (Head)	DSI = 3 (Hotspot)
NR Band n71	1	Max Allowed Power	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0
NR Band n14	1	Max Allowed Power	24.0	23.0	24.0	23.0
		Nominal	23.0	22.0	23.0	22.0
NR Band n5	1	Max Allowed Power	25.0	22.5	25.0	22.5
		Nominal	24.0	21.5	24.0	21.5
NR Band n70	2	Max Allowed Power	24.5	21.5	24.5	21.5
		Nominal	23.5	20.5	23.5	20.5
NR Band n70	4	Max Allowed Power	24.0	21.0	20.0	21.0
		Nominal	23.0	20.0	19.0	20.0
NR Band n66	2	Max Allowed Power	24.5	20.5	24.5	20.5
		Nominal	23.5	19.5	23.5	19.5
NR Band n66	4	Max Allowed Power	24.0	21.5	20.5	21.5
		Nominal	23.0	20.5	19.5	20.5
NR Band n25/n2	2	Max Allowed Power	24.5	21.0	24.5	21.0
		Nominal	23.5	20.0	23.5	20.0
NR Band n25/n2	4	Max Allowed Power	24.5	22.0	18.0	22.0
		Nominal	23.5	21.0	17.0	21.0
NR Band n30	2	Max Allowed Power	24.0	21.5	24.0	21.5
		Nominal	23.0	20.5	23.0	20.5
NR Band n30	4	Max Allowed Power	24.0	20.0	15.5	20.0
		Nominal	23.0	19.0	14.5	19.0
NR Band n41 PC3	2	Max Allowed Power	24.5	18.0	18.0	18.0
		Nominal	23.5	17.0	17.0	17.0
NR Band n41 PC2	2	Max Allowed Power	27.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0
NR Band n48	6	Max Allowed Power	22.0	13.5	15.0	13.5
		Nominal	21.0	12.5	14.0	12.5
NR Band n48	8	Max Allowed Power	17.0	15.0	16.0	15.0
		Nominal	16.0	14.0	15.0	14.0
NR Band n48	2	Max Allowed Power	21.0	16.0	16.0	16.0
		Nominal	20.0	15.0	15.0	15.0
NR Band n48	4	Max Allowed Power	17.0	16.0	16.0	16.0
		Nominal	16.0	15.0	15.0	15.0
NR Band n78 PC3	6	Max Allowed Power	24.0	15.0	16.0	15.0
		Nominal	23.0	14.0	15.0	14.0
NR Band n78 PC3	8	Max Allowed Power	19.0	18.0	18.0	18.0
		Nominal	18.0	17.0	17.0	17.0
NR Band n78 PC3	2	Max Allowed Power	18.0	18.0	18.0	18.0
		Nominal	17.0	17.0	17.0	17.0
NR Band n78 PC3	4	Max Allowed Power	17.0	16.0	16.0	16.0
		Nominal	16.0	15.0	15.0	15.0
NR Band n78 PC2	6	Max Allowed Power	28.0	15.0	16.0	15.0
		Nominal	27.0	14.0	15.0	14.0
NR Band n78 PC2	8	Max Allowed Power	24.0	18.0	18.0	18.0
		Nominal	23.0	17.0	17.0	17.0
NR Band n78 PC2	2	Max Allowed Power	27.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0
NR Band n78 PC2	4	Max Allowed Power	23.0	16.0	16.0	16.0
		Nominal	22.0	15.0	15.0	15.0
NR Band n77 PC3	6	Max Allowed Power	25.0	15.0	16.0	15.0
		Nominal	24.0	14.0	15.0	14.0
NR Band n77 PC3	8	Max Allowed Power	19.0	18.0	18.0	18.0
		Nominal	18.0	17.0	17.0	17.0
NR Band n77 PC3	2	Max Allowed Power	18.0	18.0	18.0	18.0
		Nominal	17.0	17.0	17.0	17.0
NR Band n77 PC3	4	Max Allowed Power	17.0	16.0	16.0	16.0
		Nominal	16.0	15.0	15.0	15.0
NR Band n77 PC2	6	Max Allowed Power	28.0	15.0	16.0	15.0
		Nominal	27.0	14.0	15.0	14.0
NR Band n77 PC2	8	Max Allowed Power	24.0	18.0	18.0	18.0
		Nominal	23.0	17.0	17.0	17.0
NR Band n77 PC2	2	Max Allowed Power	27.0	18.0	18.0	18.0
		Nominal	26.0	17.0	17.0	17.0
NR Band n77 PC2	4	Max Allowed Power	23.0	16.0	16.0	16.0
		Nominal	22.0	15.0	15.0	15.0

For NR TDD, the above powers listed are TDD burst average and framed average values

2.4.2 2.4 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax

Band	IEEE 802.11 Modulated Output Power (in dBm)																			
	SISO Antenna 5										SISO in MIMO MIMO									
	b		g		n		ac		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WLAN	18.0	17.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0	18.0	17.0	17.0	16.0	17.0	16.0	17.0	16.0	17.0	16.0

The below table is applicable in the following conditions:

- DSI=0 (Body-worn, Hotspot or Phablet), DSI=1(RCV)

Band	IEEE 802.11 Modulated Output Power (in dBm)																			
	SISO Antenna 5										SISO in MIMO MIMO									
	b		g		n		ac		ax (SU)		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
2.4 GHz WLAN	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0

2.4.3 5 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)							
		SISO in MIMO MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	17.0	16.0	16.0	15.0	16.0	15.0	16.0	15.0
	UNII-2A	17.0	16.0	16.0	15.0	16.0	15.0	16.0	15.0
	UNII-2C	17.0	16.0	16.0	15.0	16.0	15.0	16.0	15.0
	UNII-3	17.0	16.0	16.0	15.0	16.0	15.0	16.0	15.0
	UNII-4	17.0	16.0	16.0	15.0	16.0	15.0	16.0	15.0
5 GHz WIFI (40MHz BW)	UNII-1			15.0	14.0	15.0	14.0	15.0	14.0
	UNII-2A			15.0	14.0	15.0	14.0	15.0	14.0
	UNII-2C			15.0	14.0	15.0	14.0	15.0	14.0
	UNII-3			15.0	14.0	15.0	14.0	15.0	14.0
	UNII-4			15.0	14.0	15.0	14.0	15.0	14.0
5 GHz WIFI (80MHz BW)	UNII-1					15.0	14.0	15.0	14.0
	UNII-2A					15.0	14.0	15.0	14.0
	UNII-2C					15.0	14.0	15.0	14.0
	UNII-3					15.0	14.0	15.0	14.0
	UNII-4					15.0	14.0	15.0	14.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					14.0	13.0	14.0	13.0
	UNII-2C					14.0	13.0	14.0	13.0
	UNII-3/4					14.0	13.0	14.0	13.0

The below table is applicable in the following conditions:

- DSI=0 (Body-worn, Hotspot or Phablet), DSI=1 (RCV)

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)							
		SISO in MIMO							
		MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
5 GHz WIFI (20MHz BW)	UNII-1	11.5	10.5	11.5	10.5	11.5	10.5	11.5	10.5
	UNII-2A	11.5	10.5	11.5	10.5	11.5	10.5	11.5	10.5
	UNII-2C	11.5	10.5	11.5	10.5	11.5	10.5	11.5	10.5
	UNII-3	11.5	10.5	11.5	10.5	11.5	10.5	11.5	10.5
	UNII-4	11.5	10.5	11.5	10.5	11.5	10.5	11.5	10.5
5 GHz WIFI (40MHz BW)	UNII-1			11.5	10.5	11.5	10.5	11.5	10.5
	UNII-2A			11.5	10.5	11.5	10.5	11.5	10.5
	UNII-2C			11.5	10.5	11.5	10.5	11.5	10.5
	UNII-3			11.5	10.5	11.5	10.5	11.5	10.5
	UNII-4			11.5	10.5	11.5	10.5	11.5	10.5
5 GHz WIFI (80MHz BW)	UNII-1					11.5	10.5	11.5	10.5
	UNII-2A					11.5	10.5	11.5	10.5
	UNII-2C					11.5	10.5	11.5	10.5
	UNII-3					11.5	10.5	11.5	10.5
	UNII-4					11.5	10.5	11.5	10.5
5 GHz WIFI (160MHz BW)	UNII-1/2A					11.5	10.5	11.5	10.5
	UNII-2C					11.5	10.5	11.5	10.5
	UNII-3/4					11.5	10.5	11.5	10.5

2.4.4 6 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - SP	UNII-5	15.0	14.0	15.5	14.5
	UNII-7	17.0	16.0	17.0	16.0
6 GHz WIFI (40MHz BW) - SP	UNII-5			17.0	16.0
	UNII-7			17.0	16.0
6 GHz WIFI (80MHz BW) - SP	UNII-5			17.0	16.0
	UNII-7			17.0	16.0
6 GHz WIFI (160MHz BW) - SP	UNII-5			17.0	16.0
	UNII-7			17.0	16.0

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - LPI	UNII-5	10.0	9.0	10.0	9.0
	UNII-6	10.0	9.0	10.0	9.0
	UNII-7	10.0	9.0	10.0	9.0
	UNII-8	10.0	9.0	10.0	9.0
6 GHz WIFI (40MHz BW) - LPI	UNII-5			13.0	12.0
	UNII-6			13.0	12.0
	UNII-7			13.0	12.0
	UNII-8			13.0	12.0
6 GHz WIFI (80MHz BW) - LPI	UNII-5			16.0	15.0
	UNII-6			16.0	15.0
	UNII-7			16.0	15.0
	UNII-8			16.0	15.0
6 GHz WIFI (160MHz BW) - LPI	UNII-5			17.0	16.0
	UNII-6			17.0	16.0
	UNII-7			17.0	16.0
	UNII-8			17.0	16.0

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - SP	UNII-5	7.0	6.0	7.0	6.0
	UNII-7	7.0	6.0	7.0	6.0
6 GHz WIFI (40MHz BW) - SP	UNII-5			9.0	8.0
	UNII-7			9.0	8.0
6 GHz WIFI (80MHz BW) - SP	UNII-5			12.0	11.0
	UNII-7			12.0	11.0
6 GHz WIFI (160MHz BW) - SP	UNII-5			12.0	11.0
	UNII-7			12.0	11.0

The below table is applicable in the following conditions:

- DSI=0 (Body-worn or Phablet), DSI=1 (RCV)

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - SP	UNII-5	11.5	10.5	11.5	10.5
	UNII-7	11.5	10.5	11.5	10.5
6 GHz WIFI (40MHz BW) - SP	UNII-5			11.5	10.5
	UNII-7			11.5	10.5
6 GHz WIFI (80MHz BW) - SP	UNII-5			11.5	10.5
	UNII-7			11.5	10.5
6 GHz WIFI (160MHz BW) - SP	UNII-5			11.5	10.5
	UNII-7			11.5	10.5

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - LPI	UNII-5	10.0	9.0	10.0	9.0
	UNII-6	10.0	9.0	10.0	9.0
	UNII-7	10.0	9.0	10.0	9.0
	UNII-8	10.0	9.0	10.0	9.0
6 GHz WIFI (40MHz BW) - LPI	UNII-5			11.5	10.5
	UNII-6			11.5	10.5
	UNII-7			11.5	10.5
	UNII-8			11.5	10.5
6 GHz WIFI (80MHz BW) - LPI	UNII-5			11.5	10.5
	UNII-6			11.5	10.5
	UNII-7			11.5	10.5
	UNII-8			11.5	10.5
6 GHz WIFI (160MHz BW) - LPI	UNII-5			11.5	10.5
	UNII-6			11.5	10.5
	UNII-7			11.5	10.5
	UNII-8			11.5	10.5

Mode	Band	IEEE 802.11 Modulated Output Power (in dBm) SISO in MIMO MIMO			
		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
6 GHz WIFI (20MHz BW) - VLP	UNII-5	7.0	6.0	7.0	6.0
	UNII-7	7.0	6.0	7.0	6.0
6 GHz WIFI (40MHz BW) - VLP	UNII-5			9.0	8.0
	UNII-7			9.0	8.0
6 GHz WIFI (80MHz BW) - VLP	UNII-5			11.5	10.5
	UNII-7			11.5	10.5
6 GHz WIFI (160MHz BW) - VLP	UNII-5			11.5	10.5
	UNII-7			11.5	10.5

2.4.5 2.4 GHz Maximum Bluetooth Output Power

The below table is applicable in the following conditions:

- Maximum Power

Mode	Data Rate	Modulated Output Power (in dBm)			
		Single Antenna			
		Antenna 5		Antenna 7	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
Bluetooth	1Mbps	16.0	15.0	16.0	15.0
Bluetooth EDR	2Mbps	15.0	14.0	15.0	14.0
Bluetooth EDR	3Mbps	15.0	14.0	15.0	14.0
Bluetooth LE	1Mbps	16.0	15.0	16.0	15.0
Bluetooth LE	2Mbps	16.0	15.0	16.0	15.0
Bluetooth LE	125kbps	12.0	11.0	12.0	11.0
Bluetooth LE	500kbps	12.0	11.0	12.0	11.0

The below table is applicable in the following conditions:

- RCV Active

Mode	Data Rate	Modulated Output Power (in dBm)			
		Single Antenna			
		Antenna 5		Antenna 7	
Maximum / Nominal Power		Max	Nom.	Max	Nom.
Bluetooth	1Mbps	14.0	13.0	14.0	13.0
Bluetooth EDR	2Mbps	13.5	12.5	13.5	12.5
Bluetooth EDR	3Mbps	13.5	12.5	13.5	12.5
Bluetooth LE	1Mbps	14.0	13.0	14.0	13.0
Bluetooth LE	2Mbps	14.0	13.0	14.0	13.0
Bluetooth LE	125kbps	12.0	11.0	12.0	11.0
Bluetooth LE	500kbps	12.0	11.0	12.0	11.0

2.5 DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 cm. A diagram showing the location of the device antennas can be found in DUT Antenna Diagram & SAR Test Setup Photographs Appendix. Since the display diagonal dimension of this device is > 150 mm and <200 mm, it is considered a “phablet.” Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 2-1
Device Edges/Sides for SAR Testing

Antenna	Back	Front	Top	Bottom	Right	Left
1	Yes	Yes	No	Yes	Yes	Yes
2	Yes	Yes	No	Yes	No	Yes
4	Yes	Yes	Yes	No	Yes	No
5	Yes	Yes	Yes	No	No	Yes
6	Yes	Yes	Yes	No	No	Yes
7	Yes	Yes	No	No	No	Yes
8	Yes	Yes	Yes	No	Yes	No
9	Yes	Yes	No	No	Yes	Yes
MIMO	Yes	Yes	Yes	No	No	Yes

Note: Particular DUT edges were not required to be evaluated for wireless router SAR or phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III and FCC KDB Publication 648474 D01v06r03. The distances between the transmit antennas and the edges of the device are included in the filing. When wireless router mode is enabled, U-NII-1, U-NII-2A, U-NII-2C, U-NII-4, and WIFI6E operations are disabled.

2.6 Near Field Communications (NFC) Antenna

This DUT 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 DUT Antenna Diagram & SAR Test Setup Photographs Appendix.

2.7 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

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

Table 2-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	Notes
1	GSM voice + 2.4 GHz Bluetooth Ant 5	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
2	GSM voice + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
3	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
4	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
5	GSM voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
6	GSM voice + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
7	GSM voice + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
8	GSM voice + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
9	GSM voice + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
10	GSM voice + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
11	UMTS + 2.4 GHz Bluetooth Ant 5	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
12	UMTS + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
13	UMTS + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
14	UMTS + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
15	UMTS + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
16	UMTS + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
17	UMTS + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
18	UMTS + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
19	UMTS + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
20	UMTS + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
21	LTE + 2.4 GHz Bluetooth Ant 5	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
22	LTE + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
23	LTE + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
24	LTE + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
25	LTE + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
26	LTE + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
27	LTE + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
28	LTE + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
29	LTE + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
30	LTE + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
31	LTE + NR	Yes	Yes	N/A	Yes	
32	LTE + NR + 2.4 GHz Bluetooth Ant 5	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
33	LTE + NR + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
34	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
35	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
36	LTE + NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
37	LTE + NR + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
38	LTE + NR + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
39	LTE + NR + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
40	LTE + NR + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
41	LTE + NR + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
42	NR + 2.4 GHz Bluetooth Ant 5	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
43	NR + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
44	NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
45	NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
46	NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
47	NR + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	Yes	Yes	N/A	Yes	
48	NR + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered
49	NR + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered
50	NR + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
51	NR + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
52	GPRS/EDGE + 2.4 GHz Bluetooth Ant 5	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
53	GPRS/EDGE + 2.4 GHz Bluetooth Ant 7	N/A	N/A	N/A	Yes	
54	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
55	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
56	GPRS/EDGE + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
57	GPRS/EDGE + 2.4 GHz WLAN Ant 5 + 2.4 GHz Bluetooth Ant 7	N/A	N/A	N/A	Yes	
58	GPRS/EDGE + 2.4 GHz Bluetooth Ant 5 + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered
59	GPRS/EDGE + 2.4 GHz Bluetooth Ant 5 + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
60	GPRS/EDGE + 2.4 GHz Bluetooth Ant 7 + 5 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
61	GPRS/EDGE + 2.4 GHz Bluetooth Ant 7 + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	

1. No other simultaneous scenarios besides described above is supported for this model.
2. When the user utilizes multiple services in UMTS 3G mode it uses multi-Radio Access Bearer or multi-RAB. The power control is based on a physical control channel (Dedicated Physical Control Channel [DPCCH]) and power control will be adjusted to meet the needs of both services. Therefore, the UMTS+WLAN scenario also represents the UMTS Voice/DATA + WLAN Hotspot scenario.
3. 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.
4. 5 GHz Wireless Router is only supported for the U-NII-3 by S/W, therefore U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 were not evaluated for wireless router conditions.
5. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
6. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.
7. This device supports VoWIFI.
8. This device supports Bluetooth Tethering on Ant 5 only.
9. This device supports VoLTE.
10. This device supports VoNR.
11. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
12. NFC were evaluated for phablet based on expected usage conditions.

2.8 Miscellaneous SAR Test Considerations

(A) WIFI/BT

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, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

Since Wireless Router operations are not allowed by the chipset firmware using U-NII-1, U-NII-2A, U-NII-2C, U-NII-4 WIFI and 6 GHz, only 2.4 GHz WIFI, 2.4 GHz Bluetooth, and U-NII-3 WIFI Hotspot SAR tests and combinations are considered for SAR with respect to Wireless Router configurations according to FCC KDB 941225 D06v02r01.

This device supports IEEE 802.11ax with the following features:

a) Up to 160 MHz Bandwidth only for 5/6 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) 2 Tx antenna output
d) Up to 4KQAM is supported
e) TDWR and Band gap channels are supported for 5/6 GHz
f) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D01v06r03, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm 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 WIFI and 6 GHz, phablet SAR tests were performed. Phablet SAR was not evaluated for 2.4 GHz WLAN, 2.4 GHz Bluetooth, and U-NII-3 WLAN operations since wireless router 1g SAR was < 1.2 W/kg.

Per April 2019 TCB Workshop Notes and FCC guidance, SAR testing for 802.11ax follows initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factors for WIFI 6GHz. FCC KDB 648474, FCC KDB 941225 D07 and FCC KDB 248227 were followed for test positions, distances, and modes. Absorbed power density (APD) using a $4cm^2$ averaging area is reported based on SAR measurements. Incident power density is evaluated at 2mm ensuring that the resolution is sufficient such that

integrated power density (iPD) between d=2mm and d=λ/5mm is ≥ -1dB per equipment manufacturer guidance. Power density results are scaled up for uncertainty above 30%. Per TCB workshop October 2020 notes, 5 channels were tested for WIFI 6 GHz.

(B) 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 D05v02r04.

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 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.

Per FCC KDB Publication 648474 D01v06r03, this device is considered a "phablet" since the display diagonal dimension is greater than 150mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

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

This device supports LTE Carrier Aggregation (CA) for LTE Band 48 with two component carriers in the uplink. SAR Measurements and conducted powers were evaluated per 2017 Fall TCB Workshop Notes.

This device can transmit with antenna switching for bands/modes on antenna 2 and 4. SAR tests were performed for each antenna where switching is used per band/mode to ensure compliance. Antennas and indicated band/modes are included in section 2.4.1 of this report.
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).

NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.

SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.

Per Qualcomm guidance in 80-W2112-4, when hotspot mode applies, 10-g extremity SAR is required for the surfaces and edges with hotspot mode 1g reported SAR > 1.2 W/kg. For surfaces and edges with hotspot mode 1g SAR < 1.2 W/kg, the 10-g extremity can be excluded when the normalized *SAR_design_target* for extremity DSI is less than or equal to that of hotspot DSI.

$$SAR\_design\_target\_extremity \leq \frac{SAR\_design\_target\_hotspot}{1g\ SAR\ limit} * 10g\ SAR\ limit$$

2.9 Guidance Applied

- IEEE 1528-2013
- FCC KDB Publication 941225 D01v03r01, D05v02r05, D05Av01r02, D06v02r01 (2G/3G/4G and Hotspot)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 648474 D01v06r03 (Phablet Procedures)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- November 2017, April 2018, October 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)
- November 2017, October 2018, April 2019, November 2019, October 2020 TCBC Workshop Notes (6-8 GHz)
- SPEAG DASY6 Application Note (Interim Procedures for Devices Operating at 6-10 GHz) (Nov 2021)
- IEC/IEEE 63195-1:2022
- IEC 62479:2010

2.10 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 12 and Section 13.

2.11 Bibliography

Report Type	Report Serial Number
RF Exposure Part 0 Test Report	1M2501020001-02.A3L
RF Exposure Part 2 Test Report	1M2501020001-03.A3L
Compliance Summary Report	1M2501020001-04.A3L

3 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 71: 665.5 - 695.5 MHz				
	LTE Band 12: 699.7 - 715.3 MHz				
	LTE Band 13: 779.5 - 784.5 MHz				
	LTE Band 14: 790.5 - 795.5 MHz				
	LTE Band 26: 814.7 - 848.3 MHz				
	LTE Band 5: 824.7 - 848.3 MHz				
	LTE Band 66: 1710.7 - 1779.3 MHz				
	LTE Band 4: 1710.7 - 1754.3 MHz				
	LTE Band 25: 1850.7 - 1914.3 MHz				
	LTE Band 2: 1850.7 - 1909.3 MHz				
	LTE Band 30: 2307.5 - 2312.5 MHz				
	LTE Band 7: 2502.5 - 2567.5 MHz				
	LTE Band 41: 2498.5 - 2687.5 MHz				
	LTE Band 38: 2572.5 - 2617.5 MHz				
	LTE Band 48: 3552.5 - 3697.5 MHz				
Channel Bandwidths	LTE Band 71: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 12: 1.4 MHz , 3 MHz, 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 14: 5 MHz, 10 MHz				
	LTE Band 26: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 30: 5 MHz, 10 MHz				
	LTE Band 7: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 38: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 48: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 71: 5 MHz	665.5 (133147)		680.5 (133297)	695.5 (133447)	
LTE Band 71: 10 MHz	668 (133172)		680.5 (133297)	693 (133422)	
LTE Band 71: 15 MHz	670.5 (133197)		680.5 (133297)	690.5 (133397)	
LTE Band 71: 20 MHz	673 (133222)		680.5 (133297)	688 (133372)	
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)	715.3 (23173)	
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)	714.5 (23165)	
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)	713.5 (23155)	
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)	711 (23130)	
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)	784.5 (23255)	
LTE Band 13: 10 MHz	(N/A)		782 (23230)	(N/A)	
LTE Band 14: 5 MHz	790.5 (23305)		793 (23330)	795.5 (23355)	
LTE Band 14: 10 MHz	(N/A)		793 (23330)	(N/A)	
LTE Band 26: 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26: 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26: 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26: 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26: 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5: 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5: 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5: 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5: 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66: 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66: 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66: 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66: 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66: 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66: 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4: 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4: 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4: 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4: 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4: 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4: 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25: 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25: 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25: 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25: 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25: 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25: 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2: 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2: 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2: 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2: 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2: 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2: 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 30: 5 MHz	2307.5 (27685)		2310 (27710)	2312.5 (27735)	
LTE Band 30: 10 MHz	(N/A)		2310 (27710)	(N/A)	
LTE Band 7: 5 MHz	2502.5 (20775)		2535 (21100)	2567.5 (21425)	
LTE Band 7: 10 MHz	2505 (20800)		2535 (21100)	2565 (21400)	
LTE Band 7: 15 MHz	2507.5 (20825)		2535 (21100)	2562.5 (21375)	
LTE Band 7: 20 MHz	2510 (20850)		2535 (21100)	2560 (21350)	
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 38: 5 MHz	2572.5 (37775)		2595 (38000)	2617.5 (38225)	
LTE Band 38: 10 MHz	2575 (37800)		2595 (38000)	2615 (38200)	
LTE Band 38: 15 MHz	2577.5 (37825)		2595 (38000)	2612.5 (38175)	
LTE Band 38: 20 MHz	2580 (37850)		2595 (38000)	2610 (38150)	
LTE Band 48: 5 MHz	3552.5 (55265)	3600.8 (55748)	(N/A)	3649.2 (56232)	3697.5 (56715)
LTE Band 48: 10 MHz	3555 (55290)	3601.7 (55757)	(N/A)	3648.3 (56223)	3695 (56690)
LTE Band 48: 15 MHz	3557.5 (55315)	3602.5 (55765)	(N/A)	3647.5 (56215)	3692.5 (56665)
LTE Band 48: 20 MHz	3560 (55340)	3603.3 (55773)	(N/A)	3646.7 (56207)	3690 (56640)
UE Category	UL UE Cat 18 , DL UE Cat 16				
Modulations Supported in UL	QPSK, 16QAM, 64QAM, 256QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3~6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 16. It supports carrier aggregation, downlink MIMO features. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 16 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Wifi Offloading, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information													
Form Factor	Portable Handset												
Frequency Range of each NR transmission band	NR Band n71: 665.5 - 695.5 MHz NR Band n14: 790.5 - 795.5 MHz NR Band n5: 826.5 - 846.5 MHz NR Band n70: 1697.5 - 1707.5 MHz NR Band n66: 1712.5 - 1777.5 MHz NR Band n25: 1852.5 - 1912.5 MHz NR Band n2: 1852.5 - 1907.5 MHz NR Band n30: 2307.5 - 2312.5 MHz NR Band n41: 2501.01 - 2685 MHz NR Band n48: 3555 - 3694.98 MHz NR Band n78: 3455.01 - 3544.98 MHz; 3705 - 3795 MHz NR Band n77: 3455.01 - 3544.98 MHz; 3705 - 3975 MHz NR Band n77 DoD: 3455.01 - 3544.98 MHz												
Channel Bandwidths	NR Band n71: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n14: 5 MHz, 10 MHz NR Band n5: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n70: 5 MHz, 10 MHz, 15 MHz NR Band n66: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz NR Band n25: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz NR Band n2: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n30: 5 MHz, 10 MHz NR Band n41: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz NR Band n48: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz NR 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 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												
Channel Numbers and Frequencies (MHz)	Low		Low-Mid		Mid			Mid-High		High			
NR Band n71: 5 MHz	665.5 (133100)				680.5 (136100)			695.5 (139100)					
NR Band n71: 10 MHz	668 (133600)				680.5 (136100)			693 (138600)					
NR Band n71: 15 MHz	670.5 (134100)				680.5 (136100)			690.5 (138100)					
NR Band n71: 20 MHz	673 (134600)				680.5 (136100)			688 (137600)					
NR Band n14: 5 MHz	790.5 (158100)				793 (158600)			795.5 (159100)					
NR Band n14: 10 MHz	793 (158600)				793 (158600)			793 (158600)					
NR Band n5: 5 MHz	826.5 (165300)				836.5 (167300)			846.5 (169300)					
NR Band n5: 10 MHz	829 (165800)				836.5 (167300)			844 (168800)					
NR Band n5: 15 MHz	831.5 (166300)				836.5 (167300)			841.5 (168300)					
NR Band n5: 20 MHz	834 (166800)				836.5 (167300)			839 (167800)					
NR Band n70: 5 MHz	1697.5 (339500)				1702.5 (340500)			1707.5 (341500)					
NR Band n70: 10 MHz	1700 (340000)				1702.5 (340500)			1705 (341000)					
NR Band n70: 15 MHz	1702.5 (340500)				1702.5 (340500)			1702.5 (340500)					
NR Band n66: 5 MHz	1712.5 (342500)				1745 (349000)			1777.5 (355500)					
NR Band n66: 10 MHz	1715 (343000)				1745 (349000)			1775 (355000)					
NR Band n66: 15 MHz	1717.5 (343500)				1745 (349000)			1772.5 (354500)					
NR Band n66: 20 MHz	1720 (344000)				1745 (349000)			1770 (354000)					
NR Band n66: 25 MHz	1722.5 (344500)				1745 (349000)			1767.5 (353500)					
NR Band n66: 30 MHz	1725 (345000)				1745 (349000)			1765 (353000)					
NR Band n66: 35 MHz	1727.5 (345500)				1745 (349000)			1762.5 (352500)					
NR Band n66: 40 MHz	1730 (346000)				1745 (349000)			1760 (352000)					
NR Band n25: 5 MHz	1852.5 (370500)				1882.5 (376500)			1912.5 (382500)					
NR Band n25: 10 MHz	1855 (371000)				1882.5 (376500)			1910 (382000)					
NR Band n25: 15 MHz	1857.5 (371500)				1882.5 (376500)			1907.5 (381500)					
NR Band n25: 20 MHz	1860 (372000)				1882.5 (376500)			1905 (381000)					
NR Band n25: 25 MHz	1862.5 (372500)				1882.5 (376500)			1902.5 (380500)					
NR Band n25: 30 MHz	1865 (373000)				1882.5 (376500)			1900 (380000)					
NR Band n25: 35 MHz	1867.5 (373500)				1882.5 (376500)			1897.5 (379500)					
NR Band n25: 40 MHz	1870 (374000)				1882.5 (376500)			1895 (379000)					
NR Band n2: 5 MHz	1852.5 (370500)				1880 (376000)			1907.5 (381500)					
NR Band n2: 10 MHz	1855 (371000)				1880 (376000)			1905 (381000)					
NR Band n2: 15 MHz	1857.5 (371500)				1880 (376000)			1902.5 (380500)					
NR Band n2: 20 MHz	1860 (372000)				1880 (376000)			1900 (380000)					
NR Band n30: 5 MHz	2307.5 (461500)				2310 (462000)			2312.5 (462500)					
NR Band n30: 10 MHz	2310 (462000)				2310 (462000)			2310 (462000)					
NR Band n41: 10 MHz	2501.01 (500202)		2547 (509400)		2592.99 (518598)			2639.01 (527802)		2685 (537000)			
NR Band n41: 15 MHz	2503.5 (500700)		2548.26 (509652)		2592.99 (518598)			2637.75 (527550)		2682.51 (536502)			
NR Band n41: 20 MHz	2506.02 (501204)		2549.49 (509898)		2592.99 (518598)			2636.49 (527298)		2679.99 (535998)			
NR Band n41: 30 MHz	2511 (502200)		2552.01 (510402)		2592.99 (518598)			2634 (526800)		2674.98 (534996)			
NR Band n41: 40 MHz	2616.01 (523202)		2567.34 (513468)		(N/A)			2618.67 (523734)		2670 (534000)			
NR Band n41: 50 MHz	2521.02 (504204)				2592.99 (518598)			2664.99 (532998)					
NR Band n41: 60 MHz	2526 (505200)				2592.99 (518598)			2659.98 (531996)					
NR Band n41: 70 MHz	2531.01 (506202)				(N/A)			2655 (531000)					
NR Band n41: 80 MHz	2536.02 (507204)				(N/A)			2649.99 (529998)					
NR Band n41: 90 MHz	2541 (508200)				(N/A)			2644.98 (528996)					
NR Band n41: 100 MHz	2546.01 (509202)				2592.99 (518598)			2640 (528000)					
NR Band n48: 10 MHz	3555 (637000)		3601.68 (640112)		(N/A)			3648.33 (643222)		3694.98 (646332)			
NR Band n48: 15 MHz	3557.52 (637168)		3602.49 (640166)		(N/A)			3647.49 (643166)		3692.49 (646166)			
NR Band n48: 20 MHz	3560.01 (637334)		3603.33 (640222)		(N/A)			3646.68 (643112)		3690 (646000)			
NR Band n48: 30 MHz	3565.02 (637668)		3605.01 (640334)		(N/A)			3645 (643000)		3684.99 (645666)			
NR Band n48: 40 MHz	3570 (638000)		(N/A)		3624.99 (641666)			(N/A)		3679.98 (645332)			
NR Band n78: 10 MHz	3705 (647000)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		3795 (653000)			
NR Band n78: 15 MHz	3707.52 (647168)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		3792.48 (652832)			
NR Band n78: 20 MHz	3710.01 (647334)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		3789.99 (652666)			
NR Band n78: 25 MHz	3712.5 (647500)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		3787.5 (652500)			
NR Band n78: 30 MHz	3715.02 (647668)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		3784.98 (652332)			
NR Band n78: 40 MHz	3720 (648000)		(N/A)	(N/A)	(N/A)	(N/A)		(N/A)		3780 (652000)			
NR Band n78: 50 MHz	3725.01 (648334)		(N/A)	(N/A)	(N/A)	(N/A)		(N/A)		3774.99 (651666)			
NR Band n78: 60 MHz	(N/A)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		(N/A)			
NR Band n78: 70 MHz	(N/A)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		(N/A)			
NR Band n78: 80 MHz	(N/A)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		(N/A)			
NR Band n78: 90 MHz	(N/A)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		(N/A)			
NR Band n78: 100 MHz	(N/A)		(N/A)	(N/A)	3750 (650000)	(N/A)		(N/A)		(N/A)			
NR Band n77 DoD: 10 MHz	3455.01 (630334)				3500.01 (633334)			3544.98 (636332)					
NR Band n77 DoD: 15 MHz	3457.5 (630500)				3500.01 (633334)			3542.49 (636166)					
NR Band n77 DoD: 20 MHz	3460.02 (630668)				3500.01 (633334)			3540 (636000)					
NR Band n77 DoD: 25 MHz	3462.51 (630834)				3500.01 (633334)			3537.48 (635832)					
NR Band n77 DoD: 30 MHz	3465 (631000)				3500.01 (633334)			3534.99 (635666)					
NR Band n77 DoD: 40 MHz	3470.01 (631334)				(N/A)			3529.98 (635332)					
NR Band n77 DoD: 50 MHz	3475.02 (631668)				(N/A)			3525 (635000)					
NR Band n77 DoD: 60 MHz	(N/A)				3500.01 (633334)			(N/A)					
NR Band n77 DoD: 70 MHz	(N/A)				3500.01 (633334)			(N/A)					
NR Band n77 DoD: 80 MHz	(N/A)				3500.01 (633334)			(N/A)					
NR Band n77 DoD: 90 MHz	(N/A)				3500.01 (633334)			(N/A)					
NR Band n77 DoD: 100 MHz	(N/A)				3500.01 (633334)			(N/A)					
NR Band n77: 10 MHz	3705 (647000)		3759 (650600)	3813 (654200)	(N/A)	3867 (657800)		3921 (661400)		3975 (665000)			
NR Band n77: 15 MHz	3707.52 (647168)		3760.5 (650700)	3813.51 (654234)	(N/A)	3866.49 (657766)		3919.5 (661300)		3972.48 (664832)			
NR Band n77: 20 MHz	3710.01 (647334)		3762 (650800)	3813.99 (654266)	(N/A)	3866.01 (657734)		3918 (661200)		3969.99 (664666)			
NR Band n77: 25 MHz	3712.5 (647500)		3763.5 (650900)	3814.5 (654300)	(N/A)	3865.5 (657700)		3916.5 (661100)		3967.5 (664500)			
NR Band n77: 30 MHz	3715.02 (647668)		3765 (651000)	3815.01 (654334)	(N/A)	3864.99 (657666)		3915 (661000)		3964.98 (664332)			
NR Band n77: 40 MHz	3720 (648000)		3768 (651200)	3816 (654400)	(N/A)	3864 (657600)		3912 (660800)		3960 (664000)			
NR Band n77: 50 MHz	3725.01 (648334)		3782.49 (652166)	(N/A)	3840 (656000)	(N/A)		3897.51 (659834)		3954.99 (663666)			
NR Band n77: 60 MHz	3730.02 (648668)		3803.34 (653556)	(N/A)	(N/A)	(N/A)		3876.66 (658444)		3949.98 (663332)			
NR Band n77: 70 MHz	3735 (649000)		3804.99 (653666)	(N/A)	(N/A)	(N/A)		3875.01 (658334)		3945 (663000)			
NR Band n77: 80 MHz	3740.01 (649334)		(N/A)		3840 (656000)			(N/A)		3939.99 (662666)			
NR Band n77: 90 MHz	3745.02 (649668)		(N/A)		3840 (656000)			(N/A)		3934.98 (662332)			
NR Band n77: 100 MHz	3750 (650000)		(N/A)		(N/A)			(N/A)		3930 (662000)			
SCS for NR Band n71, n14, n5, n70, n66, n25, n2, n30	15 kHz												
SCS for NR Band n41, n48, n78, n77, n77 DoD	30 kHz												
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 256QAM												
A-MPR (Additional MPR) disabled for SAR Testing?	YES												
EN-DC and NR Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations												
LTE Anchor Bands for NR Band n71	LTE Band 2/4/66												
LTE Anchor Bands for NR Band n14	N/A												
LTE Anchor Bands for NR Band n5	LTE Band 2/4/66												
LTE Anchor Bands for NR Band n70	N/A												
LTE Anchor Bands for NR Band n66	LTE Band 2/5/12/13/48												
LTE Anchor Bands for NR Band n25	LTE Band 12												
LTE Anchor Bands for NR Band n2	LTE Band 5/12/13/48/66												
LTE Anchor Bands for NR Band n30	N/A												
LTE Anchor Bands for NR Band n41	LTE Band 2/5/12/66												
LTE Anchor Bands for NR Band n48	N/A												
LTE Anchor Bands for NR Band n78	N/A												
LTE Anchor Bands for NR Band n77	LTE Band 2/5/12/13/66												

4 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

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 [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (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 International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. 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.

4.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 4-1).

Equation 4-1
SAR Mathematical Equation

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

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

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

σ = conductivity of the tissue-simulating material (S/m)
ρ = mass density of the tissue-simulating material (kg/m^3)
E = 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 relation 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]

5 DOSIMETRIC ASSESSMENT

5.1 Measurement Procedure

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

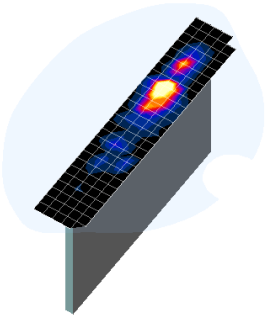


Figure 5-1
Sample SAR Area Scan

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 5-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 5-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):

   a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 5-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).

   b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 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 then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.

   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 was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 5-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area}, Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom}, Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)$*	$\Delta z_{zoom}(n>1)$*	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5*Δz_{zoom}(n-1)	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5*Δz_{zoom}(n-1)	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5*Δz_{zoom}(n-1)	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5*Δz_{zoom}(n-1)	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5*Δz_{zoom}(n-1)	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

6 DEFINITION OF REFERENCE POINTS

6.1 EAR REFERENCE POINT

Figure 6-2 shows the front, back and side views of the SAM Twin Phantom. The point "M" is the reference point for the center of the mouth, "LE" is the left ear reference point (ERP), and "RE" is the right ERP. The ERP is 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 6-1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front), also called the Reference Pivoting Line, is not perpendicular to the reference plane (see Figure 6-1). 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 [5].

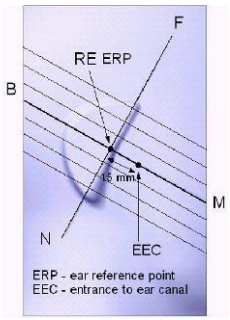


Figure 6-1
Close-Up Side view of ERP

6.2 HANDSET REFERENCE POINTS

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device 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 6-3). The acoustic output was than located at the same level as the center of the ear reference point. The test device 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 6-2
Front, back and side view of SAM Twin Phantom

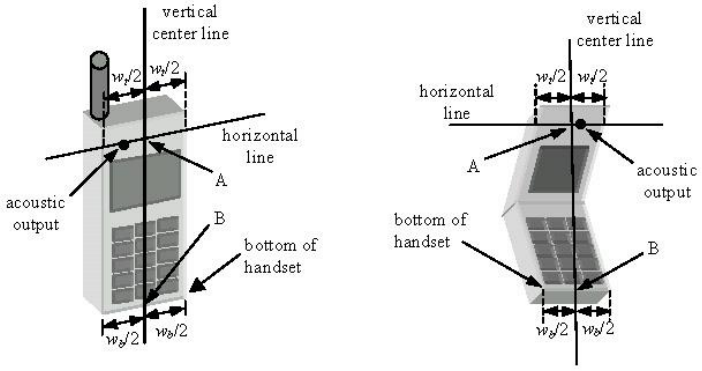


Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

7 TEST CONFIGURATION POSITIONS

7.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

7.2 Positioning for Cheek

1. The test device was positioned with the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 7-1), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

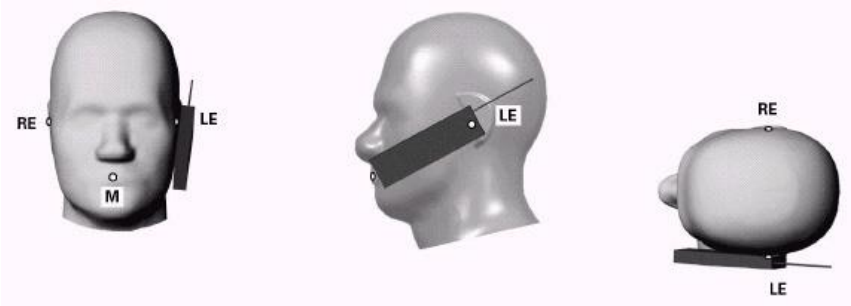


Figure 7-1 Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the device contact with the ear, the device was rotated about the NF line until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 7-2).

7.3 Positioning for Ear / 15º Tilt

With the test device aligned in the “Cheek Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15degrees.
2. The phone was then rotated around the horizontal line by 15 degrees.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the handset touched the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. In this situation, the tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 7-2).

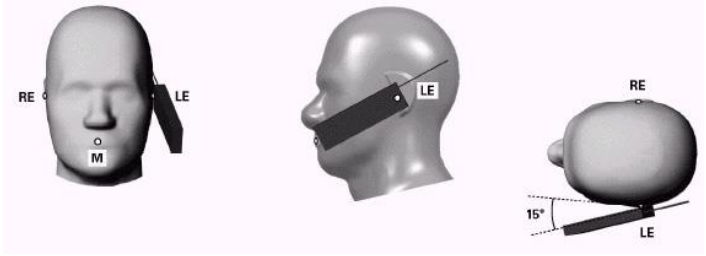


Figure 7-2 Front, Side and Top View of Ear/15º Tilt Position

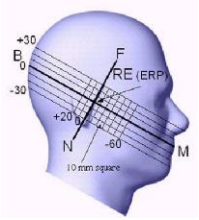


Figure 7-3
Side view w/ relevant markings

7.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones. Per IEEE 1528-2013, a rotated SAM phantom is necessary to allow probe access to such regions. Both SAM heads of the TwinSAM-Chin20 are rotated 20 degrees around the NF line. Each head can be removed from the table for emptying and cleaning.

Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D01v06r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR location identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

7.5 Body-Worn Accessory Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 7-4). Per FCC KDB Publication 648474 D01v06r03, 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. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. 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.

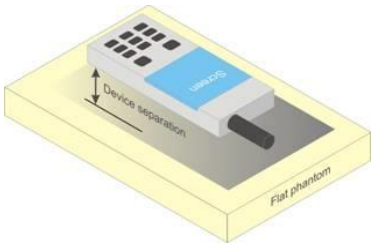


Figure 7-4
Sample Body-Worn Diagram

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-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented.
Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

7.6 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 1g body and 10g extremity SAR Exclusion Thresholds found in KDB Publication 447498 D01v06 should be applied to determine SAR test requirements.

Per KDB Publication 447498 D01v06, Cell phones (handsets) are not normally designed to be used on extremities or operated in extremity only exposure conditions. The maximum output power levels of handsets generally do not require extremity SAR testing to show compliance. Therefore, extremity SAR was not evaluated for this device.

7.7 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 x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 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.

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 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.

7.8 Phablet Configurations

For smart phones with a display diagonal dimension > 150 mm or an overall diagonal dimension > 160 mm 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 D01v06r03 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-worn 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 10g SAR. The UMPC mini-tablet 1g SAR at 5 mm is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

8 RF EXPOSURE LIMITS

8.1 Uncontrolled Environment

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.

8.2 Controlled Environment

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.

Table 8-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8.3 RF Exposure Limits for Frequencies above 6 GHz

Per §1.1310 (d)(3), the MPE limits are applied for frequencies above 6 GHz. Power Density is expressed in units of W/m^2 or mW/cm^2.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4 cm^2 per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes.

Table 8-2
Human Exposure Limits Specified in FCC 47 CFR §1.1310

Human Exposure to Radiofrequency (RF) Radiation Limits		
Frequency Range [MHz]	**Power Density** [mW/cm^2]	**Average Time** [Minutes]
(A) Limits For Occupational / Controlled Environments		
1,500 – 100,000	5.0	6
(B) Limits For General Population / Uncontrolled Environments		
1,500 – 100,000	1.0	30

Note: 1.0 mW/cm^2 is 10 W/m^2

9 FCC MEASUREMENT PROCEDURES

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

9.1 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.

9.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 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.

9.3 Procedures Used to Establish RF Signal for SAR

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

The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

9.4 SAR Measurement Conditions for UMTS

9.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 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.

9.4.2 Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

9.4.3 Body SAR Measurements

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

9.4.4 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 an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

9.4.5 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-Set 1 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.

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.

9.4.6 SAR Measurement Conditions for 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 TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

9.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r04 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating 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).

9.5.1 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.

9.5.2 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.

9.5.3 A-MPR

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

9.5.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

a. Per Section 5.2.1, 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 Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
c. Per Section 5.2.3, 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 Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to ½ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is <1.45 W/kg.

9.5.5 TDD

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05v02r04. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05v02r04. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4.

9.5.6 Downlink Only 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(s) (SCC) on the downlink only.

All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC.

9.6 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.

9.6.1 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 systems 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.

9.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. 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. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 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 – 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. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

9.6.4 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, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.5 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 in 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/ax 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. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.6 OFDM Transmission Mode and SAR Test Channel Selection

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. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac 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. Per April 2019 TCB Workshop and FCC guidance, 802.11ax was considered the highest order 802.11 mode. 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.

9.6.7 Initial Test Configuration Procedure

For OFDM, 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, lowest data rate and lowest order IEEE 802.11 mode. 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 (See Section 9.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.8 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 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, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.9 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is <1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

10 RF CONDUCTED POWERS

10.1 GSM Conducted Powers

Table 10-1
Measured P_{max} for DSI = 2 (Head) for GSM 850

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	33.00	32.90	30.81	**29.11**	27.28	26.23	24.50	22.63	21.37
	190	33.15	32.99	29.93	**29.12**	27.32	26.26	24.30	22.38	21.42
	251	33.08	33.00	29.82	**29.03**	27.13	26.24	24.39	22.36	21.60

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	23.41	23.31	24.43	**24.42**	23.91	17.03	18.31	18.20	18.19
	190	23.56	23.40	23.55	**24.43**	23.95	17.06	18.11	17.95	18.24
	251	23.49	23.41	23.44	**24.34**	23.76	17.04	18.20	17.93	18.42
GSM 850	**Frame Avg Targets:**	23.41	23.41	24.12	**24.31**	23.63	17.30	18.81	18.57	18.82

Table 10-2
Measured P_{limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) for GSM 850

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	31.60	31.57	28.57	26.75	**25.25**	26.23	24.50	22.63	21.37
	190	31.55	31.53	28.46	26.63	**25.42**	26.26	24.30	22.38	21.42
	251	31.28	31.34	28.21	26.56	**25.50**	26.24	24.39	22.36	21.60

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	22.05	22.02	22.22	22.06	**21.88**	17.03	18.31	18.20	18.19
	190	22.00	21.98	22.11	21.94	**22.05**	17.06	18.11	17.95	18.24
	251	21.73	21.79	21.86	21.87	**22.13**	17.04	18.20	17.93	18.42
GSM 850	**Frame Avg.Targets:**	22.45	22.45	22.45	22.51	**22.53**	17.30	18.81	18.57	18.82

Table 10-3
Measured P_{limit} for DSI = 2 (Head) for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	27.41	27.45	24.72	22.97	**21.50**	25.39	23.85	21.92	20.83
	661	27.49	27.65	24.75	23.04	**21.69**	25.34	24.05	21.65	20.68
	810	27.59	27.53	24.60	22.85	**21.52**	24.69	23.29	21.34	20.30

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	17.86	17.90	18.37	18.28	**18.13**	16.19	17.66	17.49	17.65
	661	17.94	18.10	18.40	18.35	**18.32**	16.14	17.86	17.22	17.50
	810	18.04	17.98	18.25	18.16	**18.15**	15.49	17.10	16.91	17.12
GSM 1900	**Frame Avg.Targets:**	18.45	18.45	18.45	18.51	**18.53**	16.10	17.81	17.57	17.82

Table 10-4
Measured P_{max} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	28.80	28.86	25.63	23.84	**22.45**	25.39	23.85	21.92	20.83
	661	28.69	28.75	25.68	23.85	**22.65**	25.34	24.05	21.65	20.68
	810	28.99	29.05	25.54	23.50	**22.51**	24.69	23.29	21.34	20.30

Calculated Maximum Frame-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 1900	512	19.25	19.31	19.25	19.15	**19.08**	16.19	17.66	17.49	17.65
	661	19.14	19.20	19.30	19.16	**19.28**	16.14	17.86	17.22	17.50
	810	19.44	19.50	19.16	18.81	**19.14**	15.49	17.10	16.91	17.12
GSM 1900	**Frame Avg Targets:**	19.45	19.45	19.52	19.51	**19.53**	16.10	17.81	17.57	17.82

Note:

1. Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
2. GPRS/EDGE (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.
3. EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8-PSK modulation do not have an impact on output power.

GSM Class: B
GPRS Multislot class: 12 (Max 4 Tx uplink slots)
EDGE Multislot class: 12 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A

Figure 10-1
Power Measurement Setup

10.2 UMTS Conducted Powers

Table 10-5
Measured P_{limit} for DSI = 0 (Body-worn or Phablet), or P_{limit} for DSI = 3 (Hotspot) for UMTS 850

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	**23.30**	23.26	23.07	-
99		12.2 kbps AMR	23.34	23.28	23.09	-
6	HSDPA	Subtest 1	22.01	21.97	21.75	0
6		Subtest 2	22.04	21.96	21.76	0
6		Subtest 3	21.52	21.46	21.24	0.5
6		Subtest 4	21.51	21.46	21.25	0.5
6	HSUPA	Subtest 1	22.02	22.04	21.86	0
6		Subtest 2	20.02	19.95	19.84	2
6		Subtest 3	21.04	20.97	20.80	1
6		Subtest 4	20.01	19.97	19.75	2
6		Subtest 5	21.98	21.97	21.76	0
8	DC-HSDPA	Subtest 1	22.01	21.97	21.75	0
8		Subtest 2	22.02	21.99	21.77	0
8		Subtest 3	21.50	21.46	21.25	0.5
8		Subtest 4	21.50	21.47	21.26	0.5

Table 10-6
Measured P_{max} for DSI = 2 (Head) for UMTS 850

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	**23.92**	23.88	23.70	-
99		12.2 kbps AMR	23.93	23.91	23.71	-
6	HSDPA	Subtest 1	23.05	23.01	22.79	0
6		Subtest 2	23.07	23.01	22.79	0
6		Subtest 3	22.55	22.48	22.28	0.5
6		Subtest 4	22.54	22.47	22.26	0.5
6	HSUPA	Subtest 1	23.05	23.00	22.81	0
6		Subtest 2	21.04	21.00	20.77	2
6		Subtest 3	22.02	22.00	21.77	1
6		Subtest 4	21.03	20.99	20.77	2
6		Subtest 5	23.02	22.99	22.77	0
8	DC-HSDPA	Subtest 1	23.02	22.97	22.75	0
8		Subtest 2	23.03	22.98	22.79	0
8		Subtest 3	22.52	22.50	22.25	0.5
8		Subtest 4	22.51	22.48	22.26	0.5

Table 10-7
Measured P_{max} for DSI = 2 (Head) for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	**23.31**	23.30	23.07	23.36	23.34	**23.62**	-
99		12.2 kbps AMR	23.24	23.26	23.02	23.38	23.35	23.41	-
6	HSDPA	Subtest 1	22.57	22.52	22.33	22.43	22.40	22.52	0
6		Subtest 2	22.54	22.55	22.31	22.41	22.40	22.48	0
6		Subtest 3	22.05	22.05	21.81	21.91	21.88	21.97	0.5
6		Subtest 4	22.04	22.04	21.79	21.91	21.89	21.98	0.5
6	HSUPA	Subtest 1	22.57	22.55	22.31	22.39	22.35	22.42	0
6		Subtest 2	20.55	20.53	20.29	20.42	20.29	20.40	2
6		Subtest 3	21.51	21.55	21.28	21.35	21.29	21.39	1
6		Subtest 4	20.55	20.55	20.28	20.36	20.36	20.41	2
6		Subtest 5	22.52	22.52	22.36	22.38	22.41	22.53	0
8	DC-HSDPA	Subtest 1	22.63	22.56	22.36	22.46	22.46	22.61	0
8		Subtest 2	22.62	22.60	22.35	22.49	22.46	22.55	0
8		Subtest 3	22.13	22.08	21.85	21.98	21.96	22.02	0.5
8		Subtest 4	22.12	22.11	21.85	21.99	21.97	22.06	0.5

Table 10-8
Measured P_{limit} for DSI = 0 (Body-worn or Phablet), DSI = 3 (Hotspot) for UMTS 1750 & UMTS 1900

3GPP Release Version	Mode	3GPP 34.121 Subtest	AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	**19.85**	19.80	19.57	18.97	18.93	**19.03**	-
99		12.2 kbps AMR	19.77	19.74	19.54	18.94	18.93	19.00	-
6	HSDPA	Subtest 1	18.59	18.52	18.31	17.81	17.77	17.87	0
6		Subtest 2	18.56	18.54	18.30	17.80	17.76	17.83	0
6		Subtest 3	18.08	18.06	17.80	17.29	17.26	17.32	0.5
6		Subtest 4	18.05	18.04	17.80	17.30	17.25	17.37	0.5
6	HSUPA	Subtest 1	18.58	18.55	18.31	17.79	17.76	17.83	0
6		Subtest 2	16.54	16.51	16.27	15.79	15.73	15.81	2
6		Subtest 3	17.54	17.52	17.28	16.79	16.76	16.84	1
6		Subtest 4	16.53	16.52	16.27	15.76	15.72	15.79	2
6		Subtest 5	18.58	18.53	18.30	17.80	17.76	17.85	0
8	DC-HSDPA	Subtest 1	18.48	18.44	18.24	17.77	17.71	17.82	0
8		Subtest 2	18.49	18.48	18.23	17.75	17.70	17.78	0
8		Subtest 3	18.00	17.92	17.74	17.25	17.22	17.29	0.5
8		Subtest 4	18.01	17.97	17.71	17.24	17.20	17.31	0.5

DC-HSDPA considerations

- 3GPP Specification 34.121-1 Release 8 Ver 8.10.0 was used for DC-HSDPA guidance
- H-Set 12 (QPSK) was confirmed to be used during DC-HSDPA measurements
- The DUT supports UE category 24 for HSDPA

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2 dB more than specified by 3GPP, but also as low as 0 dB according to the chipset implementation in this model.

Figure 10-2
Power Measurement Setup

10.3 LTE Conducted Powers

Note: Per FCC KDB Publication 941225 D05v02r05, LTE SAR for the lower bandwidths was not required for testing 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. Lower bandwidth conducted powers for all LTE bands can be found in LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

Note: Some bands do not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

LTE Carrier Aggregation Notes:

1. This device supports uplink carrier aggregation for LTE CA_ 48C, with a maximum of two component carriers. For intraband contiguous carrier aggregation scenarios, 3GPP 36.101 Table 6.2.2A-1 specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. 3GPP 36.101 6.2.3A allows for several dB of MPR to be applied when non-contiguous RB allocation is implemented. The conducted powers and MPR settings in this device are permanently implemented per the above 3GPP requirements.
2. Per FCC Guidance, the output power with uplink CA active was measured for the configuration with the highest reported SAR with single carrier for each exposure condition. The power was measured with wideband signal integration over both component carriers.

10.3.1 LTE Band 71

Table 10-9
LTE Band 71 Measured P_{Max} for all DSI - 20 MHz Bandwidth

LTE Band 71 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 133297 (680.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	23.53	0	0
	1	50	23.62		0
	1	99	**23.64**		0
	50	0	22.53	0-1	1
	50	25	22.60		1
	50	50	**22.64**		1
	100	0	22.61		1
16QAM	1	0	22.80	0-1	1
	1	50	22.81		1
	1	99	22.81		1
	50	0	21.51	0-2	2
	50	25	21.62		2
	50	50	21.62		2
	100	0	21.64		2
64QAM	1	0	21.62	0-2	2
	1	50	21.75		2
	1	99	21.76		2
	50	0	20.51	0-3	3
	50	25	20.61		3
	50	50	20.60		3
	100	0	20.61		3
256QAM	1	0	18.63	0-5	5
	1	50	18.73		5
	1	99	18.76		5
	50	0	18.55		5
	50	25	18.62		5
	50	50	18.67		5
	100	0	18.62		5

10.3.2 LTE Band 12

Table 10-10
LTE Band 12 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.36**	0	0
	1	25	24.22		0
	1	49	24.09		0
	25	0	23.23	0-1	1
	25	12	**23.25**		1
	25	25	23.16		1
	50	0	23.21		1
16QAM	1	0	23.57	0-1	1
	1	25	23.60		1
	1	49	23.48		1
	25	0	22.24	0-2	2
	25	12	22.25		2
	25	25	22.16		2
	50	0	22.20		2
64QAM	1	0	22.43	0-2	2
	1	25	22.43		2
	1	49	22.27		2
	25	0	21.26	0-3	3
	25	12	21.21		3
	25	25	21.16		3
	50	0	21.21		3
256QAM	1	0	19.21	0-5	5
	1	25	19.22		5
	1	49	19.12		5
	25	0	19.26		5
	25	12	19.22		5
	25	25	19.18		5
	50	0	19.19		5

10.3.3 LTE Band 13

Table 10-11
LTE Band 13 Measured P_{limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	23.01	0	0
	1	25	**23.07**		0
	1	49	22.93		0
	25	0	22.95	0-1	0
	25	12	**23.03**		0
	25	25	22.98		0
	50	0	23.02		0
16QAM	1	0	22.97	0-1	0
	1	25	23.04		0
	1	49	23.00		0
	25	0	21.90	0-2	1
	25	12	21.91		1
	25	25	21.80		1
	50	0	21.90		1
64QAM	1	0	22.04	0-2	1
	1	25	22.06		1
	1	49	21.99		1
	25	0	20.89	0-3	2
	25	12	20.90		2
	25	25	20.83		2
	50	0	20.86		2
256QAM	1	0	18.85	0-5	4
	1	25	19.02		4
	1	49	18.83		4
	25	0	18.83		4
	25	12	18.82		4
	25	25	18.79		4
	50	0	18.87		4

Table 10-12
LTE Band 13 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23230 (782.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.42	0	0
	1	25	**24.44**		0
	1	49	24.29		0
	25	0	23.38	0-1	1
	25	12	**23.39**		1
	25	25	23.36		1
	50	0	23.28		1
16QAM	1	0	23.72	0-1	1
	1	25	23.61		1
	1	49	23.54		1
	25	0	22.38	0-2	2
	25	12	22.38		2
	25	25	22.41		2
	50	0	22.44		2
64QAM	1	0	22.65	0-2	2
	1	25	22.64		2
	1	49	22.54		2
	25	0	21.38	0-3	3
	25	12	21.38		3
	25	25	21.40		3
	50	0	21.44		3
256QAM	1	0	19.44	0-5	5
	1	25	19.50		5
	1	49	19.44		5
	25	0	19.38		5
	25	12	19.35		5
	25	25	19.36		5
	50	0	19.42		5

10.3.4 LTE Band 14

Table 10-13
LTE Band 14 Measured P_{limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**23.25**	0	0
	1	25	23.10		0
	1	49	23.06		0
	25	0	**23.30**	0-1	0
	25	12	23.00		0
	25	25	23.04		0
	50	0	23.23		0
16QAM	1	0	23.05	0-1	0
	1	25	23.07		0
	1	49	22.89		0
	25	0	22.32	0-2	1
	25	12	22.30		1
	25	25	22.25		1
	50	0	22.29		1
64QAM	1	0	22.50	0-2	1
	1	25	22.48		1
	1	49	22.47		1
	25	0	21.33	0-3	2
	25	12	21.32		2
	25	25	21.28		2
	50	0	21.29		2
256QAM	1	0	19.44	0-5	4
	1	25	19.37		4
	1	49	19.25		4
	25	0	19.31		4
	25	12	19.30		4
	25	25	19.23		4
	50	0	19.26		4

Table 10-14
LTE Band 14 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 14 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23330 (793.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.52**	0	0
	1	25	24.50		0
	1	49	24.40		0
	25	0	**23.49**	0-1	1
	25	12	23.47		1
	25	25	23.44		1
	50	0	23.41		1
16QAM	1	0	23.61	0-1	1
	1	25	23.68		1
	1	49	23.65		1
	25	0	22.46	0-2	2
	25	12	22.47		2
	25	25	22.49		2
	50	0	22.44		2
64QAM	1	0	22.59	0-2	2
	1	25	22.73		2
	1	49	22.61		2
	25	0	21.43	0-3	3
	25	12	21.45		3
	25	25	21.47		3
	50	0	21.38		3
256QAM	1	0	19.39	0-5	5
	1	25	19.64		5
	1	49	19.56		5
	25	0	19.44		5
	25	12	19.43		5
	25	25	19.45		5
	50	0	19.39		5

10.3.1 LTE Band 5

Table 10-15
LTE Band 5 Measured P_{limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**23.17**	0	0
	1	25	22.88		0
	1	49	22.78		0
	25	0	22.90	0-1	0
	25	12	22.88		0
	25	25	**23.11**		0
	50	0	23.05		0
16QAM	1	0	23.21	0-1	0
	1	25	23.19		0
	1	49	23.07		0
	25	0	22.47	0-2	1
	25	12	22.49		1
	25	25	22.51		1
	50	0	22.49		1
64QAM	1	0	22.70	0-2	1
	1	25	22.72		1
	1	49	22.52		1
	25	0	21.49	0-3	2
	25	12	21.49		2
	25	25	21.51		2
	50	0	21.43		2
256QAM	1	0	19.63	0-5	4
	1	25	19.68		4
	1	49	19.61		4
	25	0	19.48		4
	25	12	19.46		4
	25	25	19.52		4
	50	0	19.46		4

Table 10-16
LTE Band 5 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20525 (836.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.58**	0	0
	1	25	24.53		0
	1	49	24.43		0
	25	0	23.49	0-1	1
	25	12	23.49		1
	25	25	**23.55**		1
	50	0	23.49		1
16QAM	1	0	23.96	0-1	1
	1	25	23.91		1
	1	49	23.77		1
	25	0	22.49	0-2	2
	25	12	22.51		2
	25	25	22.53		2
	50	0	22.47		2
64QAM	1	0	22.68	0-2	2
	1	25	22.83		2
	1	49	22.62		2
	25	0	21.49	0-3	3
	25	12	21.50		3
	25	25	21.49		3
	50	0	21.47		3
256QAM	1	0	19.52	0-5	5
	1	25	19.63		5
	1	49	19.65		5
	25	0	19.50		5
	25	12	19.49		5
	25	25	19.50		5
	50	0	19.46		5

10.3.2 LTE Band 26

Table 10-17
LTE Band 26 Measured P_{limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	22.98	0	0
	1	36	**23.10**		0
	1	74	22.86		0
	36	0	22.95	0-1	0
	36	18	22.99		0
	36	37	**23.20**		0
	75	0	23.04		0
16QAM	1	0	22.82	0-1	0
	1	36	23.00		0
	1	74	22.94		0
	36	0	21.88	0-2	1
	36	18	21.88		1
	36	37	21.92		1
	75	0	21.83		1
64QAM	1	0	21.78	0-2	1
	1	36	22.04		1
	1	74	21.81		1
	36	0	20.89	0-3	2
	36	18	20.86		2
	36	37	20.89		2
	75	0	20.84		2
256QAM	1	0	18.91	0-5	4
	1	36	18.89		4
	1	74	18.91		4
	36	0	18.86		4
	36	18	18.82		4
	36	37	18.87		4
	75	0	18.81		4

Table 10-18
LTE Band 26 Measured P_{Max} for DSI = 2 (Head) - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 26865 (831.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	24.32	0	0
	1	36	**24.35**		0
	1	74	24.23		0
	36	0	23.44	0-1	1
	36	18	23.44		1
	36	37	**23.47**		1
	75	0	23.41		1
16QAM	1	0	23.47	0-1	1
	1	36	23.61		1
	1	74	23.46		1
	36	0	22.45	0-2	2
	36	18	22.42		2
	36	37	22.46		2
	75	0	22.42		2
64QAM	1	0	22.55	0-2	2
	1	36	22.69		2
	1	74	22.46		2
	36	0	21.44	0-3	3
	36	18	21.40		3
	36	37	21.47		3
	75	0	21.40		3
256QAM	1	0	19.40	0-5	5
	1	36	19.62		5
	1	74	19.49		5
	36	0	19.44		5
	36	18	19.39		5
	36	37	19.45		5
	75	0	19.40		5

10.3.3 LTE Band 66

Table 10-19
LTE Band 66 (AWS) Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.47	18.51	18.53	0	0
	1	50	18.45	18.55	18.54		0
	1	99	18.49	**18.60**	18.50		0
	50	0	18.58	18.55	18.53	0-1	0
	50	25	18.60	18.63	18.52		0
	50	50	18.64	**18.66**	18.58		0
	100	0	18.53	18.58	18.51		0
16QAM	1	0	18.88	18.67	18.82	0-1	0
	1	50	18.83	18.74	18.88		0
	1	99	18.82	18.73	18.75		0
	50	0	18.57	18.51	18.48	0-2	0
	50	25	18.66	18.60	18.50		0
	50	50	18.65	18.59	18.55		0
	100	0	18.65	18.58	18.47		0
64QAM	1	0	18.83	18.73	18.61	0-2	0
	1	50	18.87	18.74	18.64		0
	1	99	18.79	18.76	18.57		0
	50	0	18.57	18.52	18.47	0-3	0
	50	25	18.65	18.60	18.48		0
	50	50	18.63	18.58	18.54		0
	100	0	18.64	18.58	18.47		0
256QAM	1	0	17.83	17.76	18.04	0-5	0.5
	1	50	17.80	17.72	18.05		0.5
	1	99	17.85	17.82	18.08		0.5
	50	0	17.68	17.63	17.88		0.5
	50	25	17.76	17.71	17.88		0.5
	50	50	17.73	17.68	17.95		0.5
	100	0	17.75	17.71	17.88		0.5

Table 10-20
LTE Band 66 (AWS) Ant 2 Measured P_{Max} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.87	22.63	22.66	0	0
	1	50	22.85	22.60	22.82		0
	1	99	**22.91**	22.87	22.68		0
	50	0	21.88	21.75	21.71	0-1	1
	50	25	**21.92**	21.83	21.84		1
	50	50	21.89	21.81	21.82		1
	100	0	21.90	21.79	21.82		1
16QAM	1	0	22.20	21.97	21.94	0-1	1
	1	50	22.32	22.12	21.93		1
	1	99	22.24	22.00	21.87		1
	50	0	20.92	20.71	20.71	0-2	2
	50	25	20.87	20.87	20.80		2
	50	50	20.85	20.83	20.81		2
	100	0	20.92	20.83	20.83		2
64QAM	1	0	21.00	20.96	20.88	0-2	2
	1	50	21.05	21.01	20.88		2
	1	99	21.03	21.09	20.87		2
	50	0	19.90	19.73	19.71	0-3	3
	50	25	19.91	19.82	19.86		3
	50	50	19.88	19.82	19.79		3
	100	0	19.89	19.79	19.81		3
256QAM	1	0	17.96	17.89	17.86	0-5	5
	1	50	18.06	17.88	17.91		5
	1	99	18.03	17.92	17.96		5
	50	0	17.86	17.70	17.70		5
	50	25	17.87	17.82	17.79		5
	50	50	17.85	17.80	17.80		5
	100	0	17.88	17.78	17.77		5

Table 10-21
LTE Band 66 (AWS) Ant 4 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**21.66**	21.24	21.00	0	0
	1	50	21.23	21.09	21.06		0
	1	99	21.17	21.10	20.95		0
	50	0	**21.48**	21.25	21.05	0-1	0
	50	25	21.42	21.26	21.10		0
	50	50	21.32	21.23	21.06		0
	100	0	21.35	21.21	21.10		0
16QAM	1	0	21.51	21.38	21.31	0-1	0
	1	50	21.52	21.40	21.32		0
	1	99	21.47	21.35	21.09		0
	50	0	21.31	21.17	21.04	0-2	0
	50	25	21.33	21.17	21.02		0
	50	50	21.18	21.06	21.01		0
	100	0	21.29	21.14	21.02		0
64QAM	1	0	21.44	21.38	21.20	0-2	0
	1	50	21.39	21.35	21.21		0
	1	99	21.42	21.25	21.03		0
	50	0	21.26	21.17	21.00	0-3	0.5
	50	25	21.22	21.17	21.00		0.5
	50	50	21.11	21.05	20.98		0.5
	100	0	21.27	21.17	20.99		0.5
256QAM	1	0	19.45	19.45	19.32	0-5	2.5
	1	50	19.36	19.43	19.23		2.5
	1	99	19.28	19.29	19.19		2.5
	50	0	19.42	19.29	19.02		2.5
	50	25	19.17	19.26	19.06		2.5
	50	50	19.03	19.18	19.09		2.5
	100	0	19.25	19.24	19.13		2.5

Table 10-22
LTE Band 66 (AWS) Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 132072 (1720.0 MHz)	Mid Channel 132322 (1745.0 MHz)	High Channel 132572 (1770.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	**20.62**	20.45	20.18	0	0
	1	50	20.52	20.33	20.20		0
	1	99	20.53	20.30	20.07		0
	50	0	**20.75**	20.46	20.30	0-1	0
	50	25	20.60	20.47	20.31		0
	50	50	20.49	20.35	20.27		0
	100	0	20.60	20.44	20.29		0
16QAM	1	0	20.86	20.61	20.58	0-1	0
	1	50	20.86	20.60	20.60		0
	1	99	20.75	20.52	20.36		0
	50	0	20.64	20.50	20.36	0-2	0
	50	25	20.60	20.48	20.33		0
	50	50	20.48	20.37	20.29		0
	100	0	20.60	20.46	20.31		0
64QAM	1	0	20.73	20.60	20.42	0-2	0
	1	50	20.68	20.55	20.51		0
	1	99	20.61	20.59	20.35		0
	50	0	20.59	20.49	20.31	0-3	0
	50	25	20.59	20.48	20.32		0
	50	50	20.50	20.34	20.31		0
	100	0	20.55	20.45	20.31		0
256QAM	1	0	19.35	19.24	18.90	0-5	2
	1	50	19.21	19.25	18.89		2
	1	99	19.15	19.11	18.81		2
	50	0	19.17	19.06	18.88		2
	50	25	19.10	19.07	18.89		2
	50	50	18.96	18.96	18.90		2
	100	0	19.17	19.05	18.91		2

10.3.4 LTE Band 25

Table 10-23
LTE Band 25 (PCS) Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.45	18.26	18.36	0	0
	1	50	18.46	18.23	18.46		0
	1	99	18.38	18.24	**18.48**		0
	50	0	18.49	18.48	18.46	0-1	0
	50	25	18.43	18.47	18.47		0
	50	50	18.39	18.49	**18.53**		0
	100	0	18.39	18.45	18.46		0
16QAM	1	0	18.79	18.67	18.57	0-1	0
	1	50	18.86	18.71	18.65		0
	1	99	18.70	18.63	18.60		0
	50	0	18.49	18.45	18.47	0-2	0
	50	25	18.44	18.52	18.50		0
	50	50	18.40	18.47	18.55		0
	100	0	18.41	18.50	18.50		0
64QAM	1	0	18.57	18.58	18.53	0-2	0
	1	50	18.60	18.67	18.66		0
	1	99	18.48	18.64	18.63		0
	50	0	18.47	18.46	18.44	0-3	0
	50	25	18.42	18.49	18.48		0
	50	50	18.38	18.47	18.52		0
	100	0	18.41	18.46	18.47		0
256QAM	1	0	17.70	17.63	17.66	0-5	0.5
	1	50	17.68	17.62	17.81		0.5
	1	99	17.65	17.70	17.80		0.5
	50	0	17.57	17.57	17.53		0.5
	50	25	17.51	17.57	17.57		0.5
	50	50	17.51	17.58	17.63		0.5
	100	0	17.47	17.56	17.59		0.5

Table 10-24
LTE Band 25 (PCS) Ant 2 Measured P_{Max} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	22.53	22.59	22.62	0	0
	1	50	22.52	22.62	**22.73**		0
	1	99	22.56	22.60	22.71		0
	50	0	21.64	21.70	**21.72**	0-1	1
	50	25	21.70	21.69	21.68		1
	50	50	21.64	21.69	21.70		1
	100	0	21.67	21.69	21.70		1
16QAM	1	0	21.99	21.82	21.94	0-1	1
	1	50	22.04	21.77	22.05		1
	1	99	21.90	21.73	21.96		1
	50	0	20.77	20.69	20.68	0-2	2
	50	25	20.68	20.69	20.70		2
	50	50	20.67	20.67	20.71		2
	100	0	20.66	20.72	20.67		2
64QAM	1	0	20.90	20.83	20.70	0-2	2
	1	50	20.89	20.86	20.85		2
	1	99	20.93	20.76	20.83		2
	50	0	19.75	19.67	19.61	0-3	3
	50	25	19.63	19.68	19.66		3
	50	50	19.66	19.69	19.71		3
	100	0	19.71	19.67	19.68		3
256QAM	1	0	17.89	17.78	17.74	0-5	5
	1	50	17.88	17.74	17.72		5
	1	99	17.89	17.90	17.87		5
	50	0	17.75	17.69	17.62		5
	50	25	17.72	17.70	17.65		5
	50	50	17.66	17.69	17.74		5
	100	0	17.67	17.70	17.70		5

Table 10-25
LTE Band 25 (PCS) Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	19.52	19.57	19.66	0	0
	1	50	19.55	19.63	**19.69**		0
	1	99	19.53	19.59	19.68		0
	50	0	19.60	19.55	19.61	0-1	0
	50	25	19.63	19.65	**19.67**		0
	50	50	19.60	19.64	19.61		0
	100	0	19.63	19.56	19.62		0
16QAM	1	0	19.73	19.88	19.79	0-1	0
	1	50	19.74	19.98	19.92		0
	1	99	19.71	19.87	19.78		0
	50	0	19.66	19.56	19.61	0-2	0
	50	25	19.68	19.66	19.64		0
	50	50	19.63	19.67	19.59		0
	100	0	19.64	19.58	19.65		0
64QAM	1	0	19.69	19.66	19.73	0-2	0
	1	50	19.76	19.71	19.81		0
	1	99	19.71	19.68	19.71		0
	50	0	19.66	19.57	19.61	0-3	0
	50	25	19.66	19.70	19.63		0
	50	50	19.65	19.65	19.62		0
	100	0	19.64	19.59	19.64		0
256QAM	1	0	17.88	17.80	17.77	0-5	2
	1	50	17.80	17.86	17.77		2
	1	99	17.90	17.89	17.87		2
	50	0	17.73	17.66	17.69		2
	50	25	17.75	17.78	17.74		2
	50	50	17.75	17.76	17.72		2
	100	0	17.75	17.67	17.74		2

Table 10-26
LTE Band 25 (PCS) Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 26140 (1860.0 MHz)	Mid Channel 26365 (1882.5 MHz)	High Channel 26590 (1905.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	17.45	17.43	17.45	0	0
	1	50	**17.53**	17.42	17.47		0
	1	99	17.48	17.44	17.43		0
	50	0	**17.64**	17.56	17.54	0-1	0
	50	25	17.63	17.61	17.57		0
	50	50	17.60	17.59	17.57		0
	100	0	17.52	17.50	17.47		0
16QAM	1	0	17.77	17.68	17.80	0-1	0
	1	50	17.89	17.66	17.95		0
	1	99	17.79	17.58	17.76		0
	50	0	17.60	17.47	17.55	0-2	0
	50	25	17.62	17.63	17.56		0
	50	50	17.60	17.61	17.56		0
	100	0	17.64	17.54	17.56		0
64QAM	1	0	17.79	17.64	17.65	0-2	0
	1	50	17.68	17.61	17.55		0
	1	99	17.68	17.60	17.59		0
	50	0	17.62	17.53	17.54	0-3	0
	50	25	17.62	17.62	17.56		0
	50	50	17.61	17.60	17.56		0
	100	0	17.60	17.50	17.59		0
256QAM	1	0	17.66	17.54	17.66	0-5	0
	1	50	17.70	17.73	17.70		0
	1	99	17.77	17.75	17.68		0
	50	0	17.61	17.52	17.56		0
	50	25	17.63	17.64	17.57		0
	50	50	17.68	17.63	17.57		0
	100	0	17.64	17.54	17.59		0

10.3.1 LTE Band 30

Table 10-27
LTE Band 30 Ant 2 Measured P_{limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	19.99	0	0
	1	25	**20.04**		0
	1	49	19.96		0
	25	0	19.97	0-1	0
	25	12	**19.99**		0
	25	25	19.96		0
	50	0	19.97		0
16QAM	1	0	20.33	0-1	0
	1	25	20.35		0
	1	49	20.25		0
	25	0	20.05	0-2	0
	25	12	20.04		0
	25	25	19.98		0
	50	0	20.01		0
64QAM	1	0	20.19	0-2	0
	1	25	20.21		0
	1	49	20.17		0
	25	0	19.58	0-3	0.5
	25	12	19.62		0.5
	25	25	19.59		0.5
	50	0	19.59		0.5
256QAM	1	0	17.67	0-5	2.5
	1	25	17.89		2.5
	1	49	17.61		2.5
	25	0	17.59		2.5
	25	12	17.61		2.5
	25	25	17.57		2.5
	50	0	17.56		2.5

Table 10-28
LTE Band 30 Ant 2 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	22.52	0	0
	1	25	**22.60**		0
	1	49	22.58		0
	25	0	**21.61**	0-1	1
	25	12	21.57		1
	25	25	21.53		1
	50	0	21.56		1
16QAM	1	0	21.21	0-1	1
	1	25	21.82		1
	1	49	21.77		1
	25	0	20.61	0-2	2
	25	12	20.56		2
	25	25	20.55		2
	50	0	20.56		2
64QAM	1	0	20.69	0-2	2
	1	25	20.84		2
	1	49	20.69		2
	25	0	19.70	0-3	3
	25	12	19.60		3
	25	25	19.51		3
	50	0	19.54		3
256QAM	1	0	17.75	0-5	5
	1	25	17.78		5
	1	49	17.65		5
	25	0	17.65		5
	25	12	17.57		5
	25	25	17.51		5
	50	0	17.52		5

Table 10-29
LTE Band 30 Ant 4 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**18.55**	0	0
	1	25	18.47		0
	1	49	18.33		0
	25	0	**18.55**	0-1	0
	25	12	18.46		0
	25	25	18.37		0
	50	0	18.31		0
16QAM	1	0	18.66	0-1	0
	1	25	18.70		0
	1	49	18.57		0
	25	0	18.42	0-2	0
	25	12	18.48		0
	25	25	18.38		0
	50	0	18.38		0
64QAM	1	0	18.66	0-2	0
	1	25	18.65		0
	1	49	18.47		0
	25	0	18.49	0-3	0
	25	12	18.53		0
	25	25	18.33		0
	50	0	18.36		0
256QAM	1	0	17.69	0-5	1
	1	25	17.75		1
	1	49	17.47		1
	25	0	17.58		1
	25	12	17.56		1
	25	25	17.45		1
	50	0	17.48		1

Table 10-30
LTE Band 30 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 10 MHz Bandwidth

LTE Band 30 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 27710 (2310.0 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**14.13**	0	0
	1	25	14.02		0
	1	49	13.86		0
	25	0	**14.05**	0-1	0
	25	12	14.00		0
	25	25	13.91		0
	50	0	13.94		0
16QAM	1	0	14.28	0-1	0
	1	25	14.22		0
	1	49	14.09		0
	25	0	14.07	0-2	0
	25	12	13.98		0
	25	25	13.91		0
	50	0	13.95		0
64QAM	1	0	14.34	0-2	0
	1	25	14.29		0
	1	49	14.19		0
	25	0	14.08	0-3	0
	25	12	14.00		0
	25	25	13.91		0
	50	0	13.94		0
256QAM	1	0	14.19	0-5	0
	1	25	14.19		0
	1	49	13.98		0
	25	0	14.05		0
	25	12	13.97		0
	25	25	13.89		0
	50	0	13.94		0

10.3.2 LTE Band 7

Table 10-31
LTE Band 7 Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	20.23	20.26	20.09	0	0
	1	50	**20.30**	20.21	20.10		0
	1	99	20.20	20.16	20.08		0
	50	0	**20.36**	20.32	20.24	0-1	0
	50	25	20.35	20.30	20.23		0
	50	50	20.31	20.25	20.11		0
	100	0	20.29	20.25	20.24		0
16QAM	1	0	20.44	20.31	20.43	0-1	0
	1	50	20.37	20.41	20.38		0
	1	99	20.41	20.32	20.33		0
	50	0	20.34	20.24	20.23	0-2	0
	50	25	20.35	20.26	20.21		0
	50	50	20.31	20.24	20.11		0
	100	0	20.34	20.27	20.22		0
64QAM	1	0	20.43	20.50	20.38	0-2	0
	1	50	20.36	20.51	20.30		0
	1	99	20.35	20.36	20.28		0
	50	0	20.32	20.25	20.21	0-3	0
	50	25	20.33	20.28	20.22		0
	50	50	20.31	20.23	20.12		0
	100	0	20.32	20.27	20.23		0
256QAM	1	0	18.47	18.52	18.55	0-5	2
	1	50	18.53	18.60	18.43		2
	1	99	18.53	18.49	18.41		2
	50	0	18.40	18.36	18.32		2
	50	25	18.41	18.36	18.34		2
	50	50	18.41	18.36	18.24		2
	100	0	18.40	18.33	18.31		2

Table 10-32
LTE Band 7 Ant 2 Measured P_{Max} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	23.13	23.11	22.73	0	0
	1	50	**23.34**	23.06	22.68		0
	1	99	22.99	23.01	22.52		0
	50	0	22.17	22.09	21.94	0-1	1
	50	25	**22.19**	22.01	21.92		1
	50	50	22.08	21.95	21.79		1
	100	0	22.10	22.03	21.92		1
16QAM	1	0	22.26	22.31	22.21	0-1	1
	1	50	22.23	22.35	22.16		1
	1	99	22.07	22.26	21.97		1
	50	0	21.18	21.13	20.93	0-2	2
	50	25	21.18	21.03	20.94		2
	50	50	21.08	20.98	20.79		2
	100	0	21.12	21.00	20.88		2
64QAM	1	0	21.24	21.19	21.03	0-2	2
	1	50	21.40	21.17	20.98		2
	1	99	21.09	21.07	21.04		2
	50	0	20.20	20.07	19.95	0-3	3
	50	25	20.21	20.00	19.92		3
	50	50	20.09	19.97	19.79		3
	100	0	20.09	20.00	19.88		3
256QAM	1	0	18.35	18.06	18.02	0-5	5
	1	50	18.22	18.21	17.88		5
	1	99	18.26	18.07	17.94		5
	50	0	18.18	18.06	17.90		5
	50	25	18.15	17.96	17.88		5
	50	50	18.05	17.99	17.78		5
	100	0	18.09	17.97	17.86		5

Table 10-33
LTE Band 7 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	18.52	18.63	18.96	0	0
	1	50	18.57	18.80	19.14		0
	1	99	18.58	18.79	**19.37**		0
	50	0	18.54	18.76	18.96	0-1	0
	50	25	18.63	18.86	**19.31**		0
	50	50	18.64	18.88	19.15		0
	100	0	18.59	18.61	19.12		0
16QAM	1	0	18.64	18.74	19.24	0-1	0
	1	50	18.77	18.83	19.49		0
	1	99	18.76	18.96	19.39		0
	50	0	18.54	18.77	19.00	0-2	0
	50	25	18.60	18.84	19.16		0
	50	50	18.63	18.86	19.16		0
	100	0	18.58	18.83	19.11		0
64QAM	1	0	18.54	18.83	19.07	0-2	0
	1	50	18.76	18.94	19.30		0
	1	99	18.76	18.95	19.24		0
	50	0	18.50	18.76	18.97	0-3	0
	50	25	18.62	18.84	19.16		0
	50	50	18.60	18.87	19.17		0
	100	0	18.57	18.86	19.13		0
256QAM	1	0	17.04	17.37	17.60	0-5	1.5
	1	50	17.10	17.39	17.75		1.5
	1	99	17.18	17.50	17.88		1.5
	50	0	16.99	17.26	17.47		1.5
	50	25	17.07	17.33	17.66		1.5
	50	50	17.10	17.39	17.68		1.5
	100	0	17.07	17.34	17.65		1.5

Table 10-34
LTE Band 7 Ant 4 Measured P_{Limit} for DSI = 1 (Head) - 20 MHz Bandwidth

LTE Band 7 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel 20850 (2510.0 MHz)	Mid Channel 21100 (2535.0 MHz)	High Channel 21350 (2560.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
QPSK	1	0	16.03	16.14	16.47	0	0
	1	50	16.10	16.30	**16.65**		0
	1	99	16.09	16.29	16.51		0
	50	0	16.06	16.28	16.55	0-1	0
	50	25	16.20	16.39	**16.69**		0
	50	50	16.15	16.31	16.68		0
	100	0	16.12	16.36	16.60		0
16QAM	1	0	16.13	16.26	16.69	0-1	0
	1	50	16.32	16.44	16.88		0
	1	99	16.27	16.49	16.88		0
	50	0	16.07	16.31	16.59	0-2	0
	50	25	16.16	16.41	16.71		0
	50	50	16.20	16.43	16.75		0
	100	0	16.12	16.37	16.69		0
64QAM	1	0	16.05	16.40	16.66	0-2	0
	1	50	16.18	16.55	16.78		0
	1	99	16.25	16.54	16.74		0
	50	0	16.02	16.30	16.55	0-3	0
	50	25	16.10	16.40	16.65		0
	50	50	16.16	16.41	16.66		0
	100	0	16.10	16.39	16.63		0
256QAM	1	0	16.03	16.41	16.56	0-5	0
	1	50	16.20	16.42	16.75		0
	1	99	16.32	16.68	16.86		0
	50	0	16.01	16.25	16.50		0
	50	25	16.11	16.38	16.63		0
	50	50	16.14	16.39	16.69		0
	100	0	16.10	16.34	16.61		0

10.3.3 LTE Band 41

Table 10-35
LTE Band 41 Ant 2 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), DSI = 3 (Hotspot), or DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	18.86	18.56	18.55	18.59	18.77	0	0
	1	50	18.88	18.55	18.49	18.58	18.79		0
	1	99	18.76	18.51	18.50	18.69	**18.89**		0
	50	0	18.95	18.69	18.46	18.61	18.85	0-1	0
	50	25	18.89	18.66	18.55	18.65	18.96		0
	50	50	18.80	18.63	18.55	18.71	**18.97**		0
	100	0	18.85	18.67	18.53	18.62	18.88		0
16QAM	1	0	18.98	18.59	18.47	18.69	18.82	0-1	0
	1	50	18.91	18.66	18.54	18.73	18.95		0
	1	99	18.86	18.39	18.49	18.71	18.87		0
	50	0	18.99	18.70	18.48	18.56	18.86	0-2	0
	50	25	18.92	18.69	18.62	18.62	18.93		0
	50	50	18.85	18.64	18.57	18.66	18.98		0
	100	0	18.86	18.65	18.57	18.57	18.88		0
64QAM	1	0	18.72	18.58	18.55	18.46	18.75	0-2	0
	1	50	18.91	18.40	18.34	18.57	18.80		0
	1	99	18.80	18.50	18.41	18.72	18.96		0
	50	0	18.97	18.67	18.48	18.58	18.87	0-3	0
	50	25	18.88	18.64	18.54	18.60	18.94		0
	50	50	18.85	18.62	18.59	18.69	18.96		0
	100	0	18.85	18.65	18.54	18.59	18.84		0
256QAM	1	0	18.27	17.82	17.80	17.84	18.04	0-5	1
	1	50	18.13	17.68	17.67	17.83	18.06		1
	1	99	17.99	17.89	17.74	18.04	18.31		1
	50	0	18.22	17.92	17.73	17.87	18.15		1
	50	25	18.19	17.95	17.85	17.87	18.23		1
	50	50	18.15	17.93	17.87	17.98	18.24		1
	100	0	18.16	17.97	17.81	17.88	18.16		1

Table 10-36
LTE Band 41 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel 39750 (2506.0 MHz)	Low-Mid Channel 40185 (2549.5 MHz)	Mid Channel 40620 (2593.0 MHz)	Mid-High Channel 41055 (2636.5 MHz)	High Channel 41490 (2680.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]						
QPSK	1	0	18.19	18.50	**18.80**	18.59	18.67	0	0
	1	50	18.17	18.59	18.76	18.52	18.68		0
	1	99	18.17	18.54	18.76	18.58	18.71		0
	50	0	18.22	18.62	18.82	18.58	18.71	0-1	0
	50	25	18.28	18.67	18.76	18.58	18.78		0
	50	50	18.24	18.64	**18.83**	18.62	18.77		0
	100	0	18.28	18.68	18.70	18.58	18.70		0
16QAM	1	0	18.29	18.62	18.98	18.65	18.62	0-1	0
	1	50	18.30	18.61	18.99	18.62	18.84		0
	1	99	18.36	18.65	18.91	18.60	18.61		0
	50	0	18.22	18.57	18.81	18.60	18.72	0-2	0
	50	25	18.31	18.66	18.78	18.58	18.81		0
	50	50	18.25	18.62	18.83	18.65	18.76		0
	100	0	18.29	18.63	18.79	18.59	18.71		0
64QAM	1	0	18.22	18.48	18.66	18.63	18.57	0-2	0
	1	50	18.20	18.49	18.83	18.53	18.70		0
	1	99	18.15	18.48	18.71	18.59	18.75		0
	50	0	18.23	18.63	18.84	18.59	18.72	0-3	0
	50	25	18.31	18.71	18.80	18.58	18.80		0
	50	50	18.26	18.64	18.85	18.63	18.76		0
	100	0	18.27	18.67	18.78	18.58	18.71		0
256QAM	1	0	16.93	17.37	17.57	17.50	17.44	0-5	1
	1	50	17.04	17.43	17.61	17.38	17.46		1
	1	99	17.18	17.50	17.58	17.42	17.54		1
	50	0	17.01	17.40	17.61	17.41	17.53		1
	50	25	17.11	17.48	17.60	17.41	17.60		1
	50	50	17.07	17.50	17.64	17.45	17.56		1
	100	0	17.10	17.48	17.60	17.37	17.48		1

Table 10-37
LTE Band 41 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	16.06	16.33	**16.73**	16.45	16.49	0	0
	1	50	16.01	16.46	16.70	16.36	16.52		0
	1	99	16.05	16.52	16.70	16.41	16.59		0
	50	0	16.21	16.55	16.79	16.50	16.59	0-1	0
	50	25	16.21	16.67	16.81	16.54	16.72		0
	50	50	16.23	16.70	**16.83**	16.48	16.68		0
	100	0	16.20	16.66	16.70	16.54	16.59		0
16QAM	1	0	16.05	16.43	16.97	16.61	16.64	0-1	0
	1	50	16.28	16.96	16.86	16.68	16.64		0
	1	99	16.02	16.59	16.70	16.37	16.53		0
	50	0	16.22	16.52	16.87	16.50	16.57	0-2	0
	50	25	16.21	16.63	16.82	16.54	16.67		0
	50	50	16.23	16.67	16.84	16.52	16.65		0
	100	0	16.20	16.61	16.79	16.54	16.58		0
64QAM	1	0	16.30	16.49	16.84	16.67	16.55	0-2	0
	1	50	16.18	16.65	16.86	16.54	16.63		0
	1	99	16.28	16.70	16.85	16.47	16.57		0
	50	0	16.21	16.55	16.81	16.45	16.56	0-3	0
	50	25	16.23	16.63	16.79	16.51	16.67		0
	50	50	16.17	16.68	16.84	16.47	16.63		0
	100	0	16.22	16.64	16.80	16.52	16.60		0
256QAM	1	0	16.18	16.34	16.63	16.43	16.46	0-5	0
	1	50	16.05	16.56	16.79	16.50	16.56		0
	1	99	16.19	16.69	16.70	16.40	16.54		0
	50	0	16.11	16.51	16.84	16.45	16.59		0
	50	25	16.20	16.64	16.83	16.53	16.68		0
	50	50	16.16	16.61	16.86	16.49	16.67		0
	100	0	16.19	16.61	16.79	16.53	16.60		0

10.3.4 LTE Band 48

Table 10-38
LTE Band 48 Ant 6 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	12.48	12.20	12.06	12.09	0	0
	1	50	12.51	12.19	12.10	12.11		0
	1	99	**12.52**	12.19	12.04	12.06		0
	50	0	12.57	12.29	12.20	12.26	0-1	0
	50	25	12.59	12.30	12.25	12.30		0
	50	50	**12.60**	12.21	12.26	12.31		0
	100	0	12.49	12.30	12.23	12.28		0
16QAM	1	0	12.43	12.22	12.22	12.14	0-1	0
	1	50	12.57	12.22	12.30	12.23		0
	1	99	12.40	12.21	12.17	12.02		0
	50	0	12.55	12.23	12.20	12.26	0-2	0
	50	25	12.57	12.29	12.23	12.30		0
	50	50	12.49	12.19	12.22	12.25		0
	100	0	12.53	12.25	12.17	12.28		0
64QAM	1	0	12.41	12.08	12.05	12.16	0-2	0
	1	50	12.46	12.11	12.14	12.21		0
	1	99	12.31	12.10	12.00	12.05		0
	50	0	12.50	12.24	12.12	12.19	0-3	0
	50	25	12.44	12.23	12.18	12.22		0
	50	50	12.46	12.22	12.11	12.15		0
	100	0	12.46	12.16	12.14	12.20		0
256QAM	1	0	12.43	12.16	12.14	12.09	0-5	0
	1	50	12.49	12.14	12.13	12.11		0
	1	99	12.55	12.10	12.10	12.06		0
	50	0	12.48	12.22	12.13	12.20		0
	50	25	12.43	12.18	12.20	12.24		0
	50	50	12.43	12.17	12.09	12.18		0
	100	0	12.41	12.14	12.16	12.20		0

Table 10-39
LTE Band 48 Ant 6 Uplink Carrier Aggregation Measured P_{Limit} for DSI= 0 (Body-worn or Phablet) or DSI = 3 (Hotspot) - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	50	50	LTE B48	20	55538	3579.8	QPSK	50	0	12.59	12.60

Table 10-40
LTE Band 48 Ant 6 Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

LTE Band 48 20 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel 55340 (3560.0 MHz)	Low-Mid Channel 55773 (3603.3 MHz)	Mid-High Channel 56207 (3646.7 MHz)	High Channel 56640 (3690.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]					
QPSK	1	0	16.88	16.72	16.23	16.47	0	0
	1	50	16.90	16.59	16.64	16.70		0
	1	99	**16.95**	16.46	16.35	16.46		0
	50	0	16.96	16.69	16.45	16.58	0-1	0
	50	25	16.97	16.71	16.48	16.59		0
	50	50	**17.00**	16.64	16.57	16.70		0
	100	0	16.94	16.72	16.49	16.59		0
16QAM	1	0	16.97	16.74	16.38	16.43	0-1	0
	1	50	16.97	16.76	16.56	16.54		0
	1	99	16.75	16.67	16.37	16.36		0
	50	0	16.99	16.70	16.42	16.57	0-2	0
	50	25	16.95	16.73	16.47	16.56		0
	50	50	16.91	16.61	16.51	16.59		0
	100	0	16.97	16.71	16.47	16.58		0
64QAM	1	0	16.93	16.64	16.33	16.39	0-2	0
	1	50	16.94	16.58	16.36	16.43		0
	1	99	16.70	16.39	16.31	16.48		0
	50	0	16.99	16.68	16.47	16.59	0-3	0
	50	25	16.92	16.73	16.51	16.64		0
	50	50	16.95	16.60	16.51	16.67		0
	100	0	16.96	16.67	16.45	16.63		0
256QAM	1	0	16.75	16.73	16.33	16.46	0-5	0
	1	50	16.74	16.68	16.37	16.54		0
	1	99	16.60	16.54	16.31	16.45		0
	50	0	16.73	16.67	16.40	16.53		0
	50	25	16.74	16.71	16.50	16.56		0
	50	50	16.72	16.60	16.50	16.61		0
	100	0	16.73	16.70	16.44	16.61		0

Table 10-41
LTE Band 48 Ant 6 Uplink Carrier Aggregation Measured P_{Limit} for DSI = 2 (Head) - 20 MHz Bandwidth

	PCC							SCC							Power	
Combination	PCC Band	PCC Bandwidth [MHz]	PCC (UL/DL) Channel	PCC (UL/DL) Frequency [MHz]	Modulation	PCC UL# RB	PCC UL RB Offset	SCC Band	SCC Bandwidth [MHz]	SCC (UL/DL) Channel	SCC (UL/DL) Frequency [MHz]	Modulation	SCC UL# RB	SCC UL RB Offset	LTE Tx.Power with UL CA Enabled (dBm)	LTE Single Carrier Tx Power (dBm)
CA_48C	LTE B48	20	55340	3560.0	QPSK	1	99	LTE B48	20	55538	3579.8	QPSK	1	0	17.00	16.95

Figure 10-3
Power Measurement Setup

10.4 NR Conducted Powers

Per October 2020 TCB Workshop Guidance, NR FR1 SAR evaluations are being generally based on adapting the existing LTE SAR procedures (FCC KDB Publication 941225 D05v02r05). Therefore, NR SAR for the lower bandwidths were not required for testing based on the measured output power and the reported NR SAR for the highest bandwidth. Lower bandwidth conducted powers for all NR bands can be found in LTE and NR Lower Bandwidth RF Conducted Powers Appendix.

Note: Some bands do not support non-overlapping channels. Per FCC Guidance, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

10.4.1 NR Band n71

Table 10-42
NR Band n71 Ant 1 Measured P_{Max} for all DSI – 20 MHz Bandwidth

NR Band n71 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	136100 (680.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	23.52	0	0.0
	1	53	**23.61**		0.0
	1	104	23.59		0.0
	50	0	22.58	0-1	1.0
	50	28	**23.60**	0	0.0
	50	56	22.59	0-1	1.0
	100	0	22.62		1.0
DFT-s-OFDM 16QAM	1	1	22.49	0-1	1.0
CP-OFDM QPSK	1	1	22.06	0-1.5	1.5

10.4.2 NR Band n14

Table 10-43
NR Band n14 Ant 1 Measured P_{limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 10 MHz Bandwidth

NR Band n14 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	158600 (793 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**21.91**	0	0.0
	1	26	21.83		0.0
	1	50	21.87		0.0
	25	0	21.93	0-1	0.0
	25	14	**21.99**	0	0.0
	25	27	21.90	0-1	0.0
	50	0	21.90		0.0
DFT-s-OFDM 16QAM	1	1	22.41	0-1	0.0
CP-OFDM QPSK	1	1	21.33	0-1.5	0.5

Table 10-44
NR Band n14 Ant 1 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

NR Band n14 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	158600 (793 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**22.71**	0	0.0
	1	26	22.67		0.0
	1	50	22.56		0.0
	25	0	21.75	0-1	1.0
	25	14	**22.72**	0	0.0
	25	27	21.66	0-1	1.0
	50	0	21.71		1.0
DFT-s-OFDM 16QAM	1	1	21.70	0-1	1.0
CP-OFDM QPSK	1	1	21.15	0-1.5	1.5

10.4.1 NR Band n5

Table 10-45
NR Band n5 Ant 1 Measured P_{max} for DSI = 2 (Head)- 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**23.91**	0	0.0
	1	53	23.75		0.0
	1	104	23.60		0.0
	50	0	22.90	0-1	1.0
	50	28	**23.79**	0	0.0
	50	56	22.71	0-1	1.0
	100	0	22.83		1.0
DFT-s-OFDM 16QAM	1	1	22.92	0-1	1.0
CP-OFDM QPSK	1	1	22.42	0-1.5	1.5

Table 10-46
NR Band n5 Ant 1 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	167300 (836.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**22.04**	0	0.0
	1	53	21.96		0.0
	1	104	21.76		0.0
	50	0	22.01	0-1	0.0
	50	28	**22.06**	0	0.0
	50	56	21.90	0-1	0.0
	100	0	22.02		0.0
DFT-s-OFDM 16QAM	1	1	22.36	0-1	0.0
CP-OFDM QPSK	1	1	21.95	0-1.5	0.0

10.4.1 NR Band n70

Table 10-47
NR Band n70 Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 15 MHz Bandwidth

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.92	0	0.0
	1	40	20.95		0.0
	1	77	**20.97**		0.0
	36	0	20.92	0-1	0.0
	36	22	**20.93**	0	0.0
	36	43	20.92	0-1	0.0
	75	0	20.91		0.0
DFT-s-OFDM 16QAM	1	1	20.94	0-1	0.0
CP-OFDM QPSK	1	1	20.97	0-1.5	0.0

Table 10-48
NR Band n70 Ant 2 Measured P_{Max} for DSI = 2 (Head) - 15 MHz Bandwidth

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	23.60	0	0.0
	1	40	**23.65**		0.0
	1	77	23.58		0.0
	36	0	22.61	0-1	1.0
	36	22	**23.59**	0	0.0
	36	43	22.57	0-1	1.0
	75	0	22.55		1.0
DFT-s-OFDM 16QAM	1	1	22.59	0-1	1.0
CP-OFDM QPSK	1	1	22.11	0-1.5	1.5

Table 10-49
NR Band n70 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 15 MHz Bandwidth

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.90**	0	0.0
	1	40	19.83		0.0
	1	77	19.77		0.0
	36	0	**19.92**	0-1	0.0
	36	22	19.90	0	0.0
	36	43	19.85	0-1	0.0
	75	0	19.89		0.0
DFT-s-OFDM 16QAM	1	1	20.43	0-1	0.0
CP-OFDM QPSK	1	1	19.91	0-1.5	0.0

Table 10-50
NR Band n70 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 15 MHz Bandwidth

NR Band n70 15 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	340500 (1702.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.07**	0	0.0
	1	40	19.03		0.0
	1	77	18.98		0.0
	36	0	**19.13**	0-1	0.0
	36	22	19.05	0	0.0
	36	43	19.04	0-1	0.0
	75	0	19.05		0.0
DFT-s-OFDM 16QAM	1	1	19.60	0-1	0.0
CP-OFDM QPSK	1	1	19.06	0-1.5	0.0

10.4.2 NR Band n66

Table 10-51
NR Band n66 Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.85**	0	0.0
	1	108	19.83		0.0
	1	214	19.78		0.0
	108	0	**19.93**	0-1	0.0
	108	54	19.90	0	0.0
	108	108	19.87	0-1	0.0
	216	0	19.81		0.0
DFT-s-OFDM 16QAM	1	1	20.31	0-1	0.0
CP-OFDM QPSK	1	1	19.78	0-1.5	0.0

Table 10-52
NR Band n66 Ant 2 Measured P_{Max} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**23.73**	0	0.0
	1	108	23.66		0.0
	1	214	23.63		0.0
	108	0	22.71	0-1	1.0
	108	54	**23.74**	0	0.0
	108	108	22.75	0-1	1.0
	216	0	22.72		1.0
DFT-s-OFDM 16QAM	1	1	22.72	0-1	1.0
CP-OFDM QPSK	1	1	22.20	0-1.5	1.5

Table 10-53
NR Band n66 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**20.46**	0	0.0
	1	108	20.30		0.0
	1	214	20.13		0.0
	108	0	**20.51**	0-1	0.0
	108	54	20.42	0	0.0
	108	108	20.29	0-1	0.0
	216	0	20.42		0.0
DFT-s-OFDM 16QAM	1	1	20.73	0-1	0.0
CP-OFDM QPSK	1	1	20.41	0-1.5	0.0

Table 10-54
NR Band n66 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n66 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	349000 (1745 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**19.52**	0	0.0
	1	108	19.47		0.0
	1	214	19.29		0.0
	108	0	**19.58**	0-1	0.0
	108	54	19.54	0	0.0
	108	108	19.45	0-1	0.0
	216	0	19.50		0.0
DFT-s-OFDM 16QAM	1	1	20.06	0-1	0.0
CP-OFDM QPSK	1	1	19.48	0-1.5	0.0

10.4.3 NR Band n25

Table 10-55
NR Band n25 Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.10	0	0.0
	1	108	**20.15**		0.0
	1	214	20.11		0.0
	108	0	20.11	0-1	0.0
	108	54	**20.19**	0	0.0
	108	108	20.15	0-1	0.0
	216	0	20.13		0.0
DFT-s-OFDM 16QAM	1	1	20.53	0-1	0.0
CP-OFDM QPSK	1	1	20.00	0-1.5	0.0

Table 10-56
NR Band n25 Ant 2 Measured P_{Max} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	23.99	0	0.0
	1	108	**24.19**		0.0
	1	214	23.83		0.0
	108	0	23.01	0-1	1.0
	108	54	**24.21**	0	0.0
	108	108	22.90	0-1	1.0
	216	0	23.10		1.0
DFT-s-OFDM 16QAM	1	1	23.47	0-1	1.0
CP-OFDM QPSK	1	1	22.38	0-1.5	1.5

Table 10-57
NR Band n25 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	20.75	0	0.0
	1	108	**21.03**		0.0
	1	214	20.91		0.0
	108	0	20.83	0-1	0.0
	108	54	20.91	0	0.0
	108	108	**20.96**	0-1	0.0
	216	0	20.93		0.0
DFT-s-OFDM 16QAM	1	1	20.76	0-1	0.0
CP-OFDM QPSK	1	1	20.81	0-1.5	0.0

Table 10-58
NR Band n25 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n25 40 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	376500 (1882.5 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	17.16	0	0.0
	1	108	**17.30**		0.0
	1	214	17.16		0.0
	108	0	17.20	0-1	0.0
	108	54	17.20	0	0.0
	108	108	**17.22**	0-1	0.0
	216	0	17.21		0.0
DFT-s-OFDM 16QAM	1	1	17.64	0-1	0.0
CP-OFDM QPSK	1	1	17.08	0-1.5	0.0

10.4.4 NR Band n30

Table 10-59
NR Band n30 Ant 2 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**20.01**	0	0.0
	1	26	19.97		0.0
	1	50	20.00		0.0
	25	0	19.97	0-1	0.0
	25	14	**20.05**	0	0.0
	25	27	19.97	0-1	0.0
	50	0	20.00		0.0
DFT-s-OFDM 16QAM	1	1	20.50	0-1	0.0
CP-OFDM QPSK	1	1	19.98	0-1.5	0.0

Table 10-60
NR Band n30 Ant 2 Measured P_{Max} for DSI = 2 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	22.49	0	0.0
	1	26	22.49		0.0
	1	50	**22.55**		0.0
	25	0	21.49	0-1	1.0
	25	14	**22.52**	0	0.0
	25	27	21.53	0-1	1.0
	50	0	21.51		1.0
DFT-s-OFDM 16QAM	1	1	21.49	0-1	1.0
CP-OFDM QPSK	1	1	21.05	0-1.5	1.5

Table 10-61
NR Band n30 Ant 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**18.61**	0	0.0
	1	26	18.46		0.0
	1	50	18.42		0.0
	25	0	18.44	0-1	0.0
	25	14	**18.47**	0	0.0
	25	27	18.43	0-1	0.0
	50	0	18.46		0.0
DFT-s-OFDM 16QAM	1	1	19.05	0-1	0.0
CP-OFDM QPSK	1	1	18.55	0-1.5	0.0

Table 10-62
NR Band n30 Ant 4 Measured P_{Limit} for DSI = 2 (Head) - 10 MHz Bandwidth

NR Band n30 10 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	462000 (2310 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**14.94**	0	0.0
	1	26	14.88		0.0
	1	50	14.79		0.0
	25	0	**14.87**	0-1	0.0
	25	14	14.84	0	0.0
	25	27	14.84	0-1	0.0
	50	0	14.86		0.0
DFT-s-OFDM 16QAM	1	1	15.39	0-1	0.0
CP-OFDM QPSK	1	1	15.01	0-1.5	0.0

10.4.5 NR Band n41

Table 10-63
NR Band n41 PC2 Antenna 2 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), DSI = 3 (Hotspot), or DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	518598 (2592.99 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	16.80	0	0.0
	1	137	16.81		0.0
	1	271	**17.22**		0.0
	135	0	16.88	0-1	0.0
	135	69	16.85	0	0.0
	135	138	**17.06**	0-1	0.0
	270	0	16.89		0.0
DFT-s-OFDM 16QAM	1	1	17.02	0-1	0.0
CP-OFDM QPSK	1	1	16.76	0-1.5	0.0

10.4.6 NR Band n48

Table 10-64
NR Band n48 Ant 6 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM QPSK	1	1	**13.16**	12.48	12.50	0	0.0
	1	53	12.87	12.13	12.20		0.0
	1	104	12.96	12.12	12.24		0.0
	50	0	**12.93**	12.24	12.18	0-1	0.0
	50	28	12.88	12.05	12.24	0	0.0
	50	56	12.84	12.15	12.13	0-1	0.0
	100	0	12.91	12.10	12.22		0.0
DFT-s-OFDM 16QAM	1	1	13.08	12.44	12.13	0-1	0.0
CP-OFDM QPSK	1	1	13.14	12.27	12.42	0-1.5	0.0

Table 10-65
NR Band n48 Ant 6 Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM QPSK	1	1	**14.59**	13.94	13.84	0	0.0
	1	53	14.34	13.59	13.60		0.0
	1	104	14.43	13.78	13.70		0.0
	50	0	**14.42**	13.78	13.64	0-1	0.0
	50	28	14.36	13.60	13.70	0	0.0
	50	56	14.33	13.59	13.65	0-1	0.0
	100	0	14.39	13.60	13.70		0.0
DFT-s-OFDM 16QAM	1	1	14.90	14.06	14.21	0-1	0.0
CP-OFDM QPSK	1	1	14.57	13.83	13.81	0-1.5	0.0

Table 10-66
NR Band n48 Antenna 8 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 3 (Hotspot) - 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth			
	Channel		
Antenna	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)
	Conducted Power [dBm]		
SRS #2 Ant 8	14.28	13.38	13.92

Table 10-67
NR Band n48 Antenna 8 Measured P_{Limit} for DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth			
	Channel		
Antenna	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)
	Conducted Power [dBm]		
SRS #2 Ant 8	15.58	15.42	15.66

Table 10-68
NR Band n48 Antenna 2, 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot), or DSI = 2 (Head) - 40 MHz Bandwidth

NR Band n48 40 MHz Bandwidth			
	Channel		
Antenna	638000 (3570 MHz)	641666 (3624.99 MHz)	645332 (3679.98 MHz)
	Conducted Power [dBm]		
SRS #3 Ant 2	15.42	15.13	15.31
SRS #4 Ant 4	15.78	15.35	15.26

10.4.7 NR Band n77

Table 10-69
NR Band n77 DoD Antenna 6 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 3 (Hotspot) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**14.55**	0	0.0
	1	137	14.29		0.0
	1	271	14.10		0.0
	135	0	**14.56**	0-1	0.0
	135	69	14.37	0	0.0
	135	138	14.20	0-1	0.0
	270	0	14.36		0.0
DFT-s-OFDM 16QAM	1	1	14.55	0-1	0.0
CP-OFDM QPSK	1	1	14.56	0-1.5	0.0

Table 10-70
NR Band n77 DoD Antenna 6 Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	633334 (3500.01 MHz) Conducted Power [dBm]		
DFT-s-OFDM QPSK	1	1	**15.58**	0	0.0
	1	137	15.44		0.0
	1	271	15.14		0.0
	135	0	**15.53**	0-1	0.0
	135	69	15.42	0	0.0
	135	138	15.23	0-1	0.0
	270	0	15.43		0.0
DFT-s-OFDM 16QAM	1	1	15.53	0-1	0.0
CP-OFDM QPSK	1	1	15.47	0-1.5	0.0

Table 10-71
NR Band n77 DoD Antenna 8, 2, 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot), or DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant 8	**16.02**
SRS #3 Ant 2	**16.77**
SRS #4 Ant 4	**15.56**

Table 10-72
NR Band n77 Antenna 6 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 3 (Hotspot) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	13.41	13.54	0	0.0
	1	137	13.58	**13.75**		0.0
	1	271	13.74	13.50		0.0
	135	0	13.48	13.70	0-1	0.0
	135	69	13.58	**13.73**	0	0.0
	135	138	13.50	13.62	0-1	0.0
	270	0	13.55	13.68		0.0
DFT-s-OFDM 16QAM	1	1	13.53	13.59	0-1	0.0
CP-OFDM QPSK	1	1	13.41	13.51	0-1.5	0.0

Table 10-73
NR Band n77 Antenna 6 Measured P_{Limit} for DSI = 0 (Body-worn or Phablet), or DSI = 3 (Hotspot) - 25 MHz Bandwidth

NR Band n77 25 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	13.90	14.66	0	0.0
	1	33	13.59	13.94		0.0
	1	63	14.21	14.59		0.0
	32	0	13.62	13.99	0-1	0.0
	32	17	13.57	13.88	0	0.0
	32	33	13.68	13.99	0-1	0.0
	64	0	13.61	13.93		0.0
DFT-s-OFDM 16QAM	1	1	13.90	14.74	0-1	0.0
CP-OFDM QPSK	1	1	13.85	14.32	0-1.5	0.0

Table 10-74
NR Band n77 Antenna 6 Measured P_{Limit} for DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	14.10	14.64	0	0.0
	1	137	14.33	**14.86**		0.0
	1	271	14.47	14.48		0.0
	135	0	14.23	14.72	0-1	0.0
	135	69	14.30	**14.74**	0	0.0
	135	138	14.25	14.65	0-1	0.0
	270	0	14.27	14.69		0.0
DFT-s-OFDM 16QAM	1	1	14.52	14.26	0-1	0.0
CP-OFDM QPSK	1	1	14.10	14.73	0-1.5	0.0

Table 10-75
NR Band n77 Antenna 6 Measured P_{Limit} for DSI = 2 (Head) - 25 MHz Bandwidth

NR Band n77 25 MHz Bandwidth						
			Channel		MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	650000 (3750 MHz)	662000 (3930 MHz)		
			Conducted Power [dBm]			
DFT-s-OFDM QPSK	1	1	14.94	15.53	0	0.0
	1	33	14.55	14.91		0.0
	1	63	15.28	15.54		0.0
	32	0	14.59	15.07	0-1	0.0
	32	17	14.50	14.88	0	0.0
	32	33	14.66	15.07	0-1	0.0
	64	0	14.54	14.98		0.0
DFT-s-OFDM 16QAM	1	1	15.33	15.68	0-1	0.0
CP-OFDM QPSK	1	1	14.57	15.59	0-1.5	0.0

Table 10-76
NR Band n77 Antenna 8, 2, 4 Measured P_{Limit} for DSI= 0 (Body-worn or Phablet), DSI = 3 (Hotspot), or DSI = 2 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant 8	16.65	**17.62**
SRS #3 Ant 2	16.08	**17.33**
SRS #4 Ant 4	14.74	**15.19**

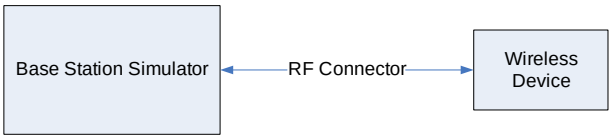


Figure 10-4
Power Measurement Setup – NR FDD

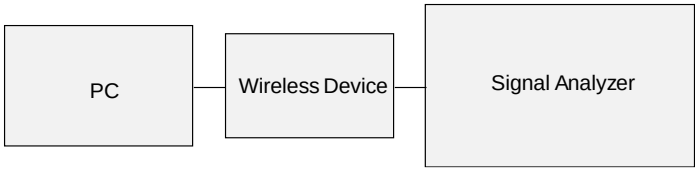


Figure 10-5
Power Measurement Setup – NR TDD

10.5 WLAN Conducted Powers

Table 10-77
2.4 GHz WLAN Measured P_{limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) or DSI = 1 (Head) – Ant 5

2.4GHz WIFI (20MHz 802.11b SISO ANT 5)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	13.34
2437	6		13.99
2462	11		13.59
2.4GHz WIFI (20MHz 802.11g SISO ANT 5)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.20
2437	6		12.23
2462	11		12.02
2.4GHz WIFI (20MHz 802.11n SISO ANT 5)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.19
2437	6		12.01
2462	11		12.10
2.4GHz WIFI (20MHz 802.11ac SISO ANT 5)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.08
2437	6		12.02
2462	11		12.15
2.4GHz WIFI (20MHz 802.11ax SISO ANT 5)			
Freq. [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**
2412	1	Average	12.19
2437	6		12.42
2462	11		12.16

Table 10-78
2.4 GHz WLAN Measured P_{limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) or DSI – 1 (Head) – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	**Channel**	**Detector**	**Conducted Power [dBm]**		
			ANT1	**ANT2**	**MIMO**
2412	1	Average	13.32	13.45	16.40
2437	6		13.99	13.42	16.72
2462	11		13.41	13.96	16.70

Table 10-79
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot, or Phablet) or DSI = 1 (Head) – MIMO

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5210	42	10.57	11.46	14.05
UNII-2A	5290	58	10.62	10.98	13.81
UNII-2C	5530	106	10.43	10.77	13.61
	5610	122	10.88	10.96	13.93
	5690	138	10.72	10.94	13.84
UNII-3	5775	155	10.81	11.17	14.00
UNII-4	5855	171	10.53	11.48	14.04

Table 10-80
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn or Phablet) or DSI = 1 (Head) – MIMO

6GHz WIFI (160MHz 802.11ax MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-5	6025	15	10.81	11.07	13.95
	6185	47	10.75	10.91	13.84
	6345	79	10.07	11.43	13.81
UNII-6	6505	111	10.70	10.97	13.85
UNII-7	6665	143	10.65	10.69	13.68
	6825	175	11.13	11.00	14.08
UNII-8	6985	207	11.18	10.75	13.98

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 modes 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.

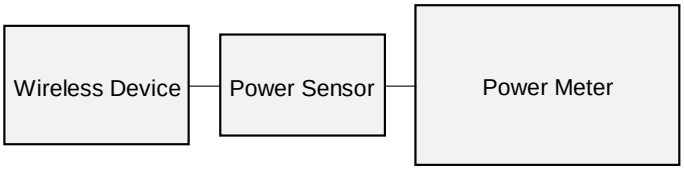


Figure 10-6
Power Measurement Setup

10.6 Bluetooth Conducted Powers

Table 10-81
Bluetooth Maximum Average RF Power – Ant 5

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	15.50	35.481
2441	1.0	39	14.46	27.925
2480	1.0	78	15.58	36.141
2402	2.0	0	14.75	29.854
2441	2.0	39	13.55	22.646
2480	2.0	78	14.80	30.200
2402	3.0	0	14.70	29.512
2441	3.0	39	13.57	22.751
2480	3.0	78	14.72	29.648

Table 10-82
Bluetooth Maximum Average RF Power – Ant 7

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	15.16	32.810
2441	1.0	39	14.73	29.717
2480	1.0	78	14.26	26.669
2402	2.0	0	14.37	27.353
2441	2.0	39	13.83	24.155
2480	2.0	78	13.44	22.080
2402	3.0	0	14.33	27.102
2441	3.0	39	13.91	24.604
2480	3.0	78	13.50	22.387

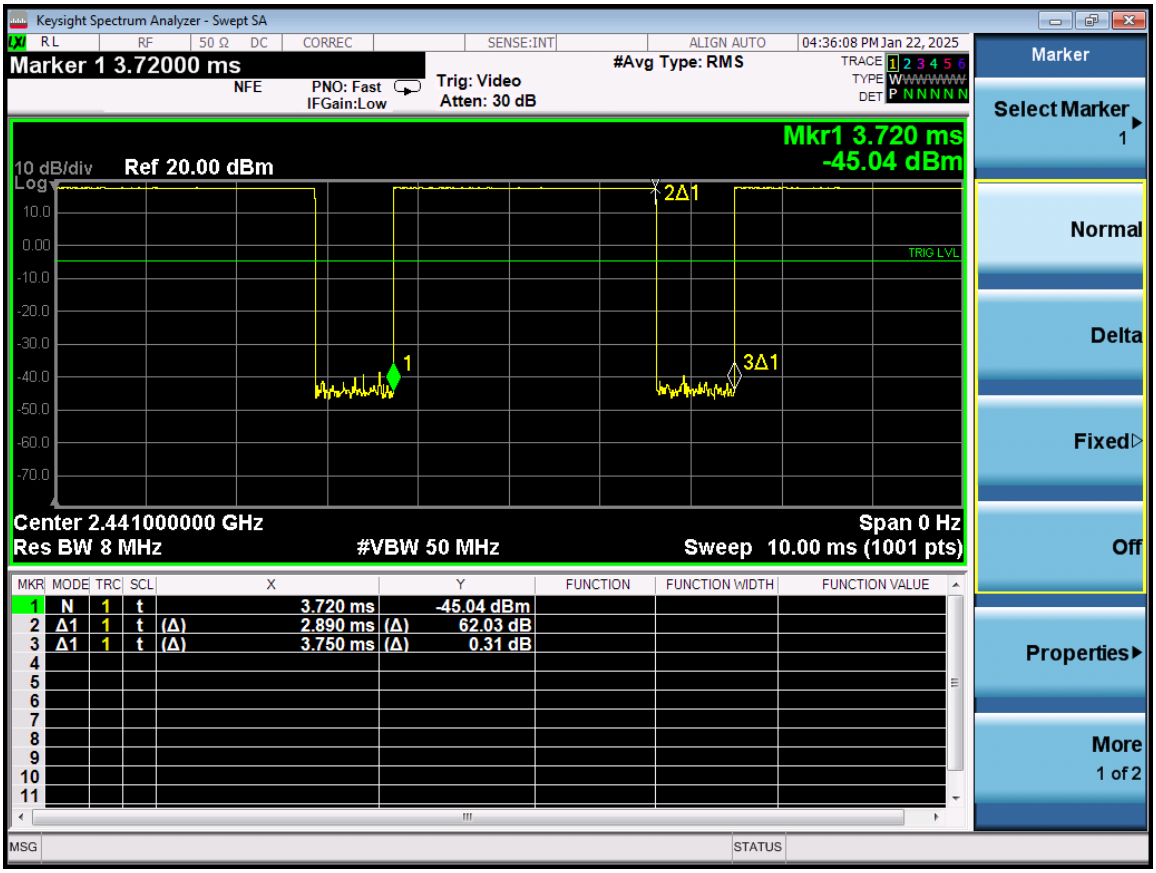
Table 10-83
Bluetooth Reduced Average RF Power (RCV Active) – Ant 5

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	13.95	24.831
2441	1.0	39	13.24	21.086
2480	1.0	78	12.78	18.967

Table 10-84
Bluetooth Reduced Average RF Power (RCV Active) – Ant 7

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	14.00	25.119
2441	1.0	39	12.79	19.011
2480	1.0	78	13.95	24.831

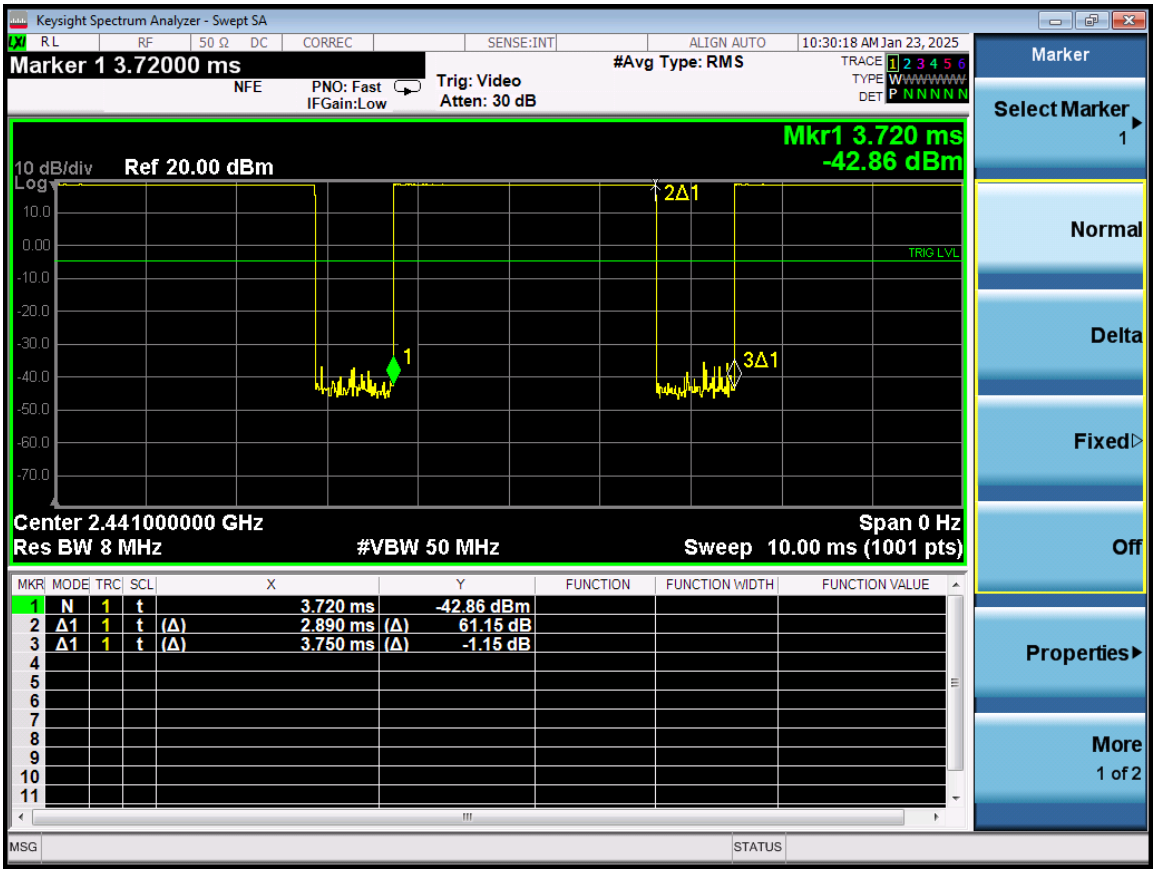
Figure 10-7
Bluetooth Antenna 5 Transmission Plot



Equation 10-1
Bluetooth Antenna 5 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.89ms}{3.75ms} * 100\% = 77.1\%$$

Figure 10-8
Bluetooth Antenna 7 Transmission Plot



Equation 10-2
Bluetooth Antenna 7 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.89ms}{3.75ms} * 100\% = 77.1\%$$

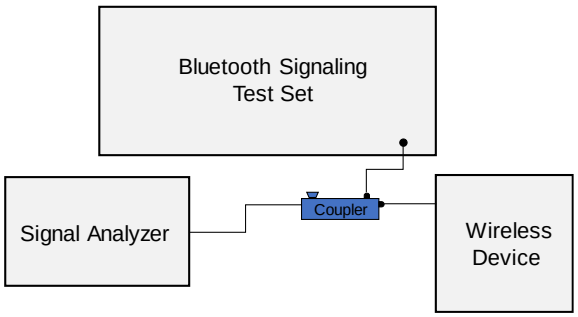


Figure 10-9
Power Measurement Setup

11 SYSTEM VERIFICATION

11.1 Tissue Verification

Table 11-1
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/13/2025	30 Head	19.0	12	0.720	52.852	0.750	55.000	-4.00%	-3.91%
			13	0.720	52.940	0.750	55.000	-4.00%	-3.75%
			14	0.720	53.022	0.750	55.000	-4.00%	-3.60%
			30	0.724	53.449	0.750	55.000	-3.47%	-2.82%
			60	0.734	53.421	0.753	54.325	-2.52%	-1.66%
			65	0.735	53.397	0.753	54.213	-2.39%	-1.51%
01/08/2025	750 Head	22.0	680	0.847	43.583	0.888	42.305	-4.62%	3.02%
			695	0.852	43.538	0.889	42.227	-4.16%	3.10%
			700	0.853	43.527	0.889	42.201	-4.05%	3.14%
			710	0.857	43.502	0.890	42.149	-3.71%	3.21%
			725	0.862	43.453	0.891	42.071	-3.25%	3.28%
			750	0.872	43.387	0.894	41.942	-2.46%	3.45%
			770	0.879	43.307	0.895	41.838	-1.79%	3.51%
			785	0.884	43.260	0.896	41.760	-1.34%	3.59%
			800	0.889	43.226	0.897	41.682	-0.89%	3.70%
			700	0.853	43.527	0.887	42.167	-3.83%	3.23%
01/17/2025	750 Head	21.9	680	0.859	42.065	0.888	42.305	-3.27%	-0.57%
			695	0.863	42.011	0.889	42.227	-2.92%	-0.51%
			710	0.868	41.960	0.890	42.149	-2.47%	-0.45%
			725	0.873	41.912	0.891	42.071	-2.02%	-0.38%
			750	0.881	41.841	0.894	41.942	-1.45%	-0.24%
			770	0.888	41.794	0.895	41.838	-0.78%	-0.11%
			785	0.893	41.756	0.896	41.760	-0.33%	-0.01%
			800	0.898	41.716	0.897	41.682	0.11%	0.08%
01/22/2025	750 Head	21.6	680	0.849	43.452	0.888	42.305	-4.39%	2.71%
			695	0.854	43.420	0.889	42.227	-3.94%	2.83%
			700	0.856	43.412	0.889	42.201	-3.71%	2.87%
			710	0.859	43.397	0.890	42.149	-3.48%	2.96%
			725	0.864	43.370	0.891	42.071	-3.03%	3.09%
			750	0.873	43.325	0.894	41.942	-2.35%	3.30%
			770	0.880	43.282	0.895	41.838	-1.68%	3.45%
			785	0.885	43.249	0.896	41.760	-1.23%	3.57%
			800	0.890	43.223	0.897	41.682	-0.78%	3.70%
02/03/2025	750 Head	21.6	680	0.849	41.810	0.888	42.305	-4.39%	-1.17%
			695	0.853	41.761	0.889	42.227	-4.05%	-1.10%
			700	0.855	41.748	0.889	42.201	-3.82%	-1.07%
			710	0.859	41.721	0.890	42.149	-3.48%	-1.02%
			725	0.863	41.672	0.891	42.071	-3.14%	-0.95%
			750	0.873	41.609	0.894	41.942	-2.35%	-0.79%
			770	0.880	41.514	0.895	41.838	-1.68%	-0.77%
			785	0.886	41.466	0.896	41.760	-1.12%	-0.70%
			800	0.892	41.425	0.897	41.682	-0.56%	-0.62%
02/05/2025	750 Head	21.9	680	0.859	42.297	0.888	42.305	-3.27%	-0.02%
			695	0.863	42.246	0.889	42.227	-2.92%	0.04%
			700	0.865	42.231	0.889	42.201	-2.70%	0.07%
			710	0.868	42.199	0.890	42.149	-2.47%	0.12%
			725	0.872	42.141	0.891	42.071	-2.13%	0.17%
			750	0.881	42.070	0.894	41.942	-1.45%	0.31%
			770	0.888	41.973	0.895	41.838	-0.78%	0.32%
			785	0.894	41.921	0.896	41.760	-0.22%	0.39%
			800	0.900	41.884	0.897	41.682	0.33%	0.48%
01/08/2025	835 Head	22.0	815	0.894	43.182	0.898	41.594	-0.45%	3.82%
			820	0.895	43.170	0.899	41.578	-0.44%	3.83%
			835	0.901	43.152	0.900	41.500	0.11%	3.98%
			850	0.907	43.119	0.916	41.500	-0.98%	3.90%
01/13/2025	835 Head	22.0	815	0.906	40.758	0.898	41.594	0.89%	-2.01%
			820	0.907	40.745	0.899	41.578	0.89%	-2.00%
			835	0.913	40.699	0.900	41.500	1.44%	-1.93%
			850	0.919	40.647	0.916	41.500	0.33%	-2.06%
01/15/2025	835 Head	22.2	815	0.905	40.713	0.898	41.594	0.78%	-2.12%
			820	0.907	40.698	0.899	41.578	0.89%	-2.12%
			835	0.912	40.651	0.900	41.500	1.33%	-2.05%
			850	0.917	40.613	0.916	41.500	0.11%	-2.14%
01/20/2025	835 Head	20.6	815	0.896	42.428	0.898	41.594	-0.22%	2.01%
			820	0.898	42.411	0.899	41.578	-0.11%	2.00%
			835	0.904	42.359	0.900	41.500	0.44%	2.07%
			850	0.910	42.312	0.916	41.500	-0.66%	1.96%
02/03/2025	835 Head	19.0	815	0.861	41.890	0.898	41.594	-4.12%	0.71%
			820	0.863	41.879	0.899	41.578	-4.00%	0.72%
			835	0.869	41.853	0.900	41.500	-3.44%	0.85%
			850	0.875	41.813	0.916	41.500	-4.48%	0.75%
02/05/2025	835 Head	21.9	815	0.905	41.837	0.898	41.594	0.78%	0.58%
			820	0.906	41.828	0.899	41.578	0.78%	0.60%
			835	0.911	41.811	0.900	41.500	1.22%	0.75%
			850	0.916	41.774	0.916	41.500	0.00%	0.66%

Table 11-2
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (˚C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/20/2025	1750 Head	21.9	1700	1.286	38.470	1.343	40.145	-4.24%	-4.17%
			1705	1.289	38.462	1.345	40.141	-4.16%	-4.18%
			1710	1.292	38.454	1.348	40.136	-4.15%	-4.19%
			1720	1.297	38.435	1.354	40.126	-4.21%	-4.21%
			1745	1.311	38.397	1.368	40.087	-4.17%	-4.22%
			1750	1.314	38.389	1.371	40.079	-4.16%	-4.22%
			1770	1.324	38.351	1.383	40.047	-4.27%	-4.24%
			1790	1.334	38.315	1.394	40.016	-4.30%	-4.25%
01/22/2025	1750 Head	24.8	1700	1.284	41.817	1.343	40.145	-4.39%	4.16%
			1705	1.287	41.813	1.345	40.141	-4.31%	4.17%
			1710	1.289	41.809	1.348	40.136	-4.38%	4.17%
			1720	1.295	41.803	1.354	40.126	-4.36%	4.18%
			1745	1.309	41.779	1.368	40.087	-4.31%	4.22%
			1750	1.311	41.775	1.371	40.079	-4.38%	4.23%
			1770	1.323	41.752	1.383	40.047	-4.34%	4.26%
			1790	1.335	41.733	1.394	40.016	-4.23%	4.29%
02/04/2025	1750 Head	21.5	1700	1.297	42.125	1.343	40.145	-3.43%	4.93%
			1705	1.300	42.118	1.345	40.141	-3.35%	4.93%
			1710	1.303	42.108	1.348	40.136	-3.34%	4.91%
			1720	1.309	42.088	1.354	40.126	-3.32%	4.89%
			1745	1.326	42.035	1.368	40.087	-3.07%	4.86%
			1750	1.329	42.026	1.371	40.079	-3.06%	4.86%
			1770	1.341	41.985	1.383	40.047	-3.04%	4.84%
			1790	1.352	41.944	1.394	40.016	-3.01%	4.82%
02/06/2025	1750 Head	23.7	1700	1.339	40.370	1.343	40.145	-0.30%	0.56%
			1705	1.342	40.363	1.345	40.141	-0.22%	0.55%
			1710	1.345	40.356	1.348	40.136	-0.22%	0.55%
			1720	1.350	40.343	1.354	40.126	-0.30%	0.54%
			1745	1.364	40.297	1.368	40.087	-0.29%	0.52%
			1750	1.367	40.289	1.371	40.079	-0.29%	0.52%
			1770	1.379	40.254	1.383	40.047	-0.29%	0.52%
			1790	1.390	40.222	1.394	40.016	-0.29%	0.51%
02/12/2025	1750 Head	19.8	1700	1.325	38.435	1.343	40.145	-1.34%	-4.26%
			1705	1.327	38.426	1.345	40.141	-1.34%	-4.27%
			1710	1.330	38.416	1.348	40.136	-1.34%	-4.29%
			1720	1.336	38.395	1.354	40.126	-1.33%	-4.31%
			1745	1.350	38.343	1.368	40.087	-1.32%	-4.35%
			1750	1.352	38.332	1.371	40.079	-1.39%	-4.36%
			1770	1.364	38.292	1.383	40.047	-1.37%	-4.38%
			1790	1.376	38.252	1.394	40.016	-1.29%	-4.41%
02/18/2025	1750 Head	20.0	1700	1.279	39.275	1.343	40.145	-4.77%	-2.17%
			1705	1.282	39.269	1.345	40.141	-4.68%	-2.17%
			1710	1.286	39.262	1.348	40.136	-4.60%	-2.18%
			1720	1.292	39.251	1.354	40.126	-4.58%	-2.18%
			1745	1.308	39.221	1.368	40.087	-4.39%	-2.16%
			1750	1.312	39.213	1.371	40.079	-4.30%	-2.16%
			1770	1.324	39.177	1.383	40.047	-4.27%	-2.17%
			1790	1.337	39.140	1.394	40.016	-4.09%	-2.19%
01/15/2025	1900 Head	23.8	1850	1.359	41.761	1.400	40.000	-2.93%	4.40%
			1860	1.365	41.749	1.400	40.000	-2.50%	4.37%
			1880	1.377	41.721	1.400	40.000	-1.64%	4.30%
			1900	1.388	41.702	1.400	40.000	-0.86%	4.26%
			1905	1.391	41.697	1.400	40.000	-0.64%	4.24%
			1910	1.394	41.693	1.400	40.000	-0.43%	4.23%
			1920	1.400	41.684	1.400	40.000	0.00%	4.21%
01/20/2025	1900 Head	21.9	1850	1.365	38.218	1.400	40.000	-2.50%	-4.45%
			1860	1.370	38.208	1.400	40.000	-2.14%	-4.48%
			1880	1.380	38.189	1.400	40.000	-1.43%	-4.53%
			1900	1.391	38.174	1.400	40.000	-0.64%	-4.57%
			1905	1.394	38.169	1.400	40.000	-0.43%	-4.58%
			1910	1.397	38.164	1.400	40.000	-0.21%	-4.59%
			1920	1.403	38.154	1.400	40.000	0.21%	-4.61%
02/04/2025	1900 Head	23.8	1850	1.413	39.000	1.400	40.000	0.93%	-2.50%
			1860	1.419	38.986	1.400	40.000	1.36%	-2.54%
			1880	1.431	38.950	1.400	40.000	2.21%	-2.62%
			1900	1.442	38.917	1.400	40.000	3.00%	-2.71%
			1905	1.446	38.910	1.400	40.000	3.29%	-2.73%
			1910	1.449	38.902	1.400	40.000	3.50%	-2.75%
			1920	1.455	38.882	1.400	40.000	3.93%	-2.80%
02/04/2025	1900 Head	21.5	1850	1.388	41.828	1.400	40.000	-0.86%	4.57%
			1860	1.394	41.809	1.400	40.000	-0.43%	4.52%
			1880	1.406	41.775	1.400	40.000	0.43%	4.44%
			1900	1.417	41.739	1.400	40.000	1.21%	4.35%
			1905	1.420	41.730	1.400	40.000	1.43%	4.32%
			1910	1.424	41.721	1.400	40.000	1.71%	4.30%
			1920	1.430	41.704	1.400	40.000	2.14%	4.26%
02/06/2025	1900 Head	21.8	1850	1.356	38.640	1.400	40.000	-3.14%	-3.40%
			1860	1.361	38.624	1.400	40.000	-2.79%	-3.44%
			1880	1.372	38.597	1.400	40.000	-2.00%	-3.51%
			1900	1.383	38.562	1.400	40.000	-1.21%	-3.60%
			1905	1.386	38.552	1.400	40.000	-1.00%	-3.62%
			1910	1.389	38.542	1.400	40.000	-0.79%	-3.65%
			1920	1.395	38.524	1.400	40.000	-0.36%	-3.69%
02/06/2025	1900 Head	23.7	1850	1.423	40.117	1.400	40.000	1.64%	0.29%
			1860	1.428	40.101	1.400	40.000	2.00%	0.25%
			1880	1.439	40.073	1.400	40.000	2.79%	0.18%
			1900	1.450	40.055	1.400	40.000	3.57%	0.14%
			1905	1.453	40.050	1.400	40.000	3.79%	0.12%
			1910	1.456	40.047	1.400	40.000	4.00%	0.12%
			1920	1.462	40.033	1.400	40.000	4.43%	0.08%
02/18/2025	1900 Head	20.0	1850	1.377	39.061	1.400	40.000	-1.64%	-2.35%
			1860	1.384	39.042	1.400	40.000	-1.14%	-2.40%
			1880	1.396	39.002	1.400	40.000	-0.29%	-2.49%
			1900	1.410	38.967	1.400	40.000	0.71%	-2.58%
			1905	1.413	38.960	1.400	40.000	0.93%	-2.60%
			1910	1.417	38.953	1.400	40.000	1.21%	-2.62%
			1920	1.423	38.940	1.400	40.000	1.64%	-2.65%

Table 11-3
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/13/2025	2450 Head	21.5	2300	1.716	38.350	1.670	39.500	2.75%	-2.91%
			2310	1.723	38.330	1.679	39.480	2.62%	-2.91%
			2320	1.731	38.308	1.687	39.460	2.61%	-2.92%
			2400	1.791	38.179	1.756	39.289	1.99%	-2.83%
			2450	1.830	38.088	1.800	39.200	1.67%	-2.84%
			2480	1.852	38.039	1.833	39.162	1.04%	-2.87%
			2500	1.867	37.999	1.855	39.136	0.65%	-2.91%
			2510	1.874	37.979	1.866	39.123	0.43%	-2.92%
			2535	1.895	37.938	1.893	39.092	0.11%	-2.95%
			2550	1.908	37.920	1.909	39.073	-0.05%	-2.95%
			2560	1.916	37.910	1.920	39.060	-0.21%	-2.94%
			2600	1.947	37.845	1.964	39.009	-0.87%	-2.98%
			2650	1.989	37.748	2.018	38.945	-1.44%	-3.07%
			2680	2.012	37.701	2.051	38.907	-1.90%	-3.10%
			2700	2.028	37.665	2.073	38.882	-2.17%	-3.13%
01/28/2025	2450 Head	22.0	2300	1.725	39.566	1.670	39.500	3.29%	0.17%
			2310	1.732	39.550	1.679	39.480	3.16%	0.18%
			2320	1.740	39.537	1.687	39.460	3.14%	0.20%
			2400	1.802	39.426	1.756	39.289	2.62%	0.35%
			2450	1.843	39.353	1.800	39.200	2.39%	0.39%
			2480	1.865	39.303	1.833	39.162	1.75%	0.36%
			2500	1.880	39.268	1.855	39.136	1.35%	0.34%
			2510	1.888	39.249	1.866	39.123	1.18%	0.32%
			2535	1.909	39.207	1.893	39.092	0.85%	0.29%
			2550	1.921	39.180	1.909	39.073	0.63%	0.27%
			2560	1.929	39.164	1.920	39.060	0.47%	0.27%
			2600	1.960	39.093	1.964	39.009	-0.20%	0.22%
			2650	2.002	39.001	2.018	38.945	-0.79%	0.14%
			2680	2.025	38.949	2.051	38.907	-1.27%	0.11%
			2700	2.040	38.916	2.073	38.882	-1.59%	0.09%
02/10/2025	2450 Head	20.8	2300	1.716	39.135	1.670	39.500	2.75%	-0.92%
			2310	1.723	39.112	1.679	39.480	2.62%	-0.93%
			2320	1.731	39.091	1.687	39.460	2.61%	-0.94%
			2400	1.794	38.973	1.756	39.289	2.16%	-0.80%
			2450	1.835	38.900	1.800	39.200	1.94%	-0.77%
			2480	1.858	38.852	1.833	39.162	1.36%	-0.79%
			2500	1.874	38.804	1.855	39.136	1.02%	-0.85%
			2510	1.883	38.786	1.866	39.123	0.91%	-0.86%
			2535	1.904	38.755	1.893	39.092	0.58%	-0.86%
			2550	1.917	38.734	1.909	39.073	0.42%	-0.87%
			2560	1.925	38.719	1.920	39.060	0.26%	-0.87%
			2600	1.957	38.636	1.964	39.009	-0.36%	-0.96%
			2650	2.002	38.549	2.018	38.945	-0.79%	-1.02%
			2680	2.025	38.486	2.051	38.907	-1.27%	-1.08%
			2700	2.042	38.445	2.073	38.882	-1.50%	-1.12%
02/12/2025	2450 Head	24.2	2300	1.728	40.788	1.670	39.500	3.47%	3.26%
			2310	1.735	40.774	1.679	39.480	3.34%	3.28%
			2320	1.742	40.762	1.687	39.460	3.26%	3.30%
			2400	1.801	40.648	1.756	39.289	2.56%	3.46%
			2450	1.838	40.567	1.800	39.200	2.11%	3.49%
			2480	1.860	40.519	1.833	39.162	1.47%	3.47%
			2500	1.875	40.488	1.855	39.136	1.08%	3.45%
			2510	1.883	40.473	1.866	39.123	0.91%	3.45%
			2535	1.901	40.444	1.893	39.092	0.42%	3.46%
			2550	1.913	40.422	1.909	39.073	0.21%	3.45%
			2560	1.920	40.406	1.920	39.060	0.00%	3.45%
			2600	1.951	40.334	1.964	39.009	-0.66%	3.40%
			2650	1.990	40.259	2.018	38.945	-1.39%	3.37%
			2680	2.013	40.215	2.051	38.907	-1.85%	3.36%
			2700	2.028	40.177	2.073	38.882	-2.17%	3.33%
02/18/2025	2450 Head	20.5	2300	1.668	38.186	1.670	39.500	-0.10%	-3.33%
			2310	1.677	38.181	1.679	39.480	-0.13%	-3.29%
			2320	1.684	38.176	1.687	39.460	-0.18%	-3.25%
			2400	1.745	38.054	1.756	39.289	-0.60%	-3.14%
			2450	1.779	37.972	1.800	39.200	-1.16%	-3.13%
			2480	1.805	37.921	1.833	39.162	-1.51%	-3.17%
			2500	1.822	37.914	1.855	39.136	-1.79%	-3.12%
			2510	1.829	37.903	1.866	39.123	-1.99%	-3.12%
			2535	1.846	37.840	1.893	39.092	-2.49%	-3.20%
			2550	1.859	37.787	1.909	39.073	-2.65%	-3.29%
			2560	1.869	37.763	1.920	39.060	-2.68%	-3.32%
			2600	1.901	37.744	1.964	39.009	-3.21%	-3.24%
			2650	1.938	37.600	2.018	38.945	-3.97%	-3.45%
			2680	1.965	37.583	2.051	38.907	-4.17%	-3.40%
			2700	1.978	37.575	2.073	38.882	-4.57%	-3.36%
02/18/2025	2450 Head	20.8	2300	1.701	38.400	1.670	39.500	1.84%	-2.78%
			2310	1.710	38.420	1.679	39.480	1.85%	-2.69%
			2320	1.716	38.436	1.687	39.460	1.71%	-2.60%
			2400	1.779	38.290	1.756	39.289	1.32%	-2.54%
			2450	1.802	38.156	1.800	39.200	0.09%	-2.66%
			2480	1.838	38.105	1.833	39.162	0.27%	-2.70%
			2500	1.857	38.165	1.855	39.136	0.09%	-2.48%
			2510	1.861	38.169	1.866	39.123	-0.26%	-2.44%
			2535	1.870	38.043	1.893	39.092	-1.23%	-2.68%
			2550	1.884	37.941	1.909	39.073	-1.32%	-2.90%
			2560	1.898	37.905	1.920	39.060	-1.16%	-2.96%
			2600	1.936	38.011	1.964	39.009	-1.43%	-2.56%
			2650	1.966	37.740	2.018	38.945	-2.58%	-3.10%
			2680	2.005	37.804	2.051	38.907	-2.22%	-2.83%
			2700	2.014	37.859	2.073	38.882	-2.86%	-2.63%
02/20/2025	2450 Head	20.2	2300	1.678	38.052	1.670	39.500	0.48%	-3.67%
			2310	1.685	38.035	1.679	39.480	0.36%	-3.66%
			2320	1.692	38.020	1.687	39.460	0.30%	-3.65%
			2400	1.753	37.900	1.756	39.289	-0.17%	-3.54%
			2450	1.792	37.817	1.800	39.200	-0.44%	-3.53%
			2480	1.813	37.781	1.833	39.162	-1.09%	-3.53%
			2500	1.828	37.751	1.855	39.136	-1.46%	-3.54%
			2510	1.836	37.734	1.866	39.123	-1.61%	-3.55%
			2535	1.857	37.695	1.893	39.092	-1.90%	-3.57%
			2550	1.869	37.669	1.909	39.073	-2.10%	-3.59%
			2560	1.877	37.652	1.920	39.060	-2.24%	-3.60%
			2600	1.909	37.577	1.964	39.009	-2.80%	-3.67%
			2650	1.951	37.491	2.018	38.945	-3.32%	-3.73%
			2680	1.975	37.438	2.051	38.907	-3.71%	-3.78%
			2700	1.990	37.397	2.073	38.882	-4.00%	-3.82%

element

Table 11-4
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/20/2025	3600 Head	19.5	3300	2.598	38.159	2.708	38.157	-4.06%	0.01%
			3350	2.645	38.069	2.759	38.100	-4.13%	-0.08%
			3450	2.735	37.876	2.861	37.986	-4.40%	-0.29%
			3500	2.782	37.786	2.913	37.929	-4.50%	-0.38%
			3550	2.830	37.699	2.964	37.871	-4.52%	-0.45%
			3560	2.840	37.684	2.974	37.860	-4.51%	-0.46%
			3600	2.879	37.606	3.015	37.814	-4.51%	-0.55%
			3650	2.929	37.523	3.066	37.757	-4.47%	-0.62%
			3690	2.967	37.445	3.107	37.711	-4.51%	-0.71%
			3700	2.976	37.435	3.117	37.700	-4.52%	-0.70%
			3750	3.022	37.353	3.169	37.643	-4.64%	-0.77%
			3900	3.172	37.092	3.323	37.471	-4.54%	-1.01%
			3930	3.203	37.044	3.353	37.437	-4.47%	-1.05%
			4100	3.385	36.761	3.528	37.243	-4.05%	-1.29%
			4150	3.437	36.671	3.579	37.186	-3.97%	-1.38%
01/22/2025	3600 Head	19.5	3300	2.619	39.332	2.708	38.157	-3.29%	3.08%
			3350	2.666	39.236	2.759	38.100	-3.37%	2.98%
			3450	2.756	39.058	2.861	37.986	-3.67%	2.82%
			3500	2.803	38.960	2.913	37.929	-3.78%	2.72%
			3550	2.852	38.887	2.964	37.871	-3.78%	2.68%
			3560	2.865	38.869	2.974	37.860	-3.67%	2.67%
			3600	2.905	38.798	3.015	37.814	-3.65%	2.60%
			3650	2.956	38.742	3.066	37.757	-3.59%	2.61%
			3690	2.994	38.663	3.107	37.711	-3.64%	2.52%
			3700	3.004	38.643	3.117	37.700	-3.63%	2.50%
			3750	3.054	38.570	3.169	37.643	-3.63%	2.46%
			3900	3.209	38.285	3.323	37.471	-3.43%	2.17%
			3930	3.242	38.241	3.353	37.437	-3.31%	2.15%
			4100	3.429	37.996	3.528	37.243	-2.81%	2.02%
			4150	3.485	37.902	3.579	37.186	-2.63%	1.93%
01/22/2025	3600 Head	20.5	3300	2.763	36.633	2.708	38.157	2.03%	-3.99%
			3350	2.801	36.570	2.759	38.100	1.52%	-4.02%
			3450	2.874	36.444	2.861	37.986	0.45%	-4.06%
			3500	2.912	36.364	2.913	37.929	-0.03%	-4.13%
			3550	2.949	36.305	2.964	37.871	-0.51%	-4.14%
			3560	2.958	36.293	2.974	37.860	-0.54%	-4.14%
			3600	2.992	36.229	3.015	37.814	-0.76%	-4.19%
			3650	3.033	36.186	3.066	37.757	-1.08%	-4.16%
			3690	3.064	36.124	3.107	37.711	-1.38%	-4.21%
			3700	3.073	36.108	3.117	37.700	-1.41%	-4.22%
			3750	3.114	36.063	3.169	37.643	-1.74%	-4.20%
			3900	3.240	35.852	3.323	37.471	-2.50%	-4.32%
			3930	3.266	35.821	3.353	37.437	-2.59%	-4.32%
			4100	3.416	35.629	3.528	37.243	-3.17%	-4.33%
			4150	3.464	35.568	3.579	37.186	-3.21%	-4.35%
02/18/2025	3600 Head	19.2	3300	2.637	39.960	2.708	38.157	-2.62%	4.73%
			3350	2.689	39.877	2.759	38.100	-2.54%	4.66%
			3450	2.785	39.691	2.861	37.986	-2.66%	4.49%
			3500	2.825	39.581	2.913	37.929	-3.02%	4.36%
			3550	2.879	39.493	2.964	37.871	-2.87%	4.28%
			3560	2.894	39.472	2.974	37.860	-2.69%	4.26%
			3600	2.927	39.411	3.015	37.814	-2.92%	4.22%
			3650	2.982	39.282	3.066	37.757	-2.74%	4.04%
			3690	3.021	39.230	3.107	37.711	-2.77%	4.03%
			3700	3.031	39.205	3.117	37.700	-2.76%	3.99%
			3750	3.085	39.103	3.169	37.643	-2.65%	3.88%
			3900	3.251	38.876	3.323	37.471	-2.17%	3.75%
			3930	3.273	38.816	3.353	37.437	-2.39%	3.68%
			4100	3.470	38.502	3.528	37.243	-1.64%	3.38%
			4150	3.528	38.409	3.579	37.186	-1.42%	3.29%
02/19/2025	3600 Head	19.1	3300	2.628	39.269	2.708	38.157	-2.95%	2.91%
			3350	2.679	39.152	2.759	38.100	-2.90%	2.76%
			3450	2.772	38.965	2.861	37.986	-3.11%	2.58%
			3500	2.820	38.872	2.913	37.929	-3.19%	2.49%
			3550	2.874	38.781	2.964	37.871	-3.04%	2.40%
			3560	2.887	38.743	2.974	37.860	-2.93%	2.33%
			3600	2.926	38.671	3.015	37.814	-2.95%	2.27%
			3650	2.983	38.570	3.066	37.757	-2.71%	2.15%
			3690	3.022	38.461	3.107	37.711	-2.74%	1.99%
			3700	3.031	38.439	3.117	37.700	-2.76%	1.96%
			3750	3.081	38.312	3.169	37.643	-2.78%	1.78%
			3900	3.225	37.916	3.323	37.471	-2.95%	1.19%
			3930	3.264	37.836	3.353	37.437	-2.65%	1.07%
			4100	3.456	37.485	3.528	37.243	-2.04%	0.65%
			4150	3.511	37.367	3.579	37.186	-1.90%	0.49%

Table 11-5
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/20/2025	5200-5800 Head	22.2	5150	4.436	36.936	4.608	36.050	-3.73%	2.46%
			5160	4.447	36.932	4.618	36.040	-3.70%	2.48%
			5170	4.455	36.918	4.629	36.030	-3.76%	2.46%
			5180	4.462	36.892	4.635	36.009	-3.73%	2.45%
			5190	4.472	36.858	4.645	35.998	-3.72%	2.39%
			5200	4.483	36.836	4.655	35.986	-3.69%	2.36%
			5210	4.496	36.819	4.666	35.975	-3.64%	2.35%
			5220	4.510	36.800	4.676	35.963	-3.55%	2.33%
			5240	4.539	36.765	4.696	35.940	-3.34%	2.30%
			5250	4.551	36.755	4.706	35.929	-3.29%	2.30%
			5260	4.562	36.750	4.717	35.917	-3.29%	2.32%
			5270	4.570	36.730	4.727	35.906	-3.32%	2.29%
			5280	4.578	36.707	4.737	35.894	-3.36%	2.27%
			5290	4.586	36.679	4.748	35.883	-3.41%	2.22%
			5300	4.596	36.649	4.758	35.871	-3.40%	2.17%
			5310	4.611	36.627	4.768	35.860	-3.29%	2.14%
			5320	4.626	36.612	4.778	35.849	-3.18%	2.13%
			5500	4.824	36.306	4.963	35.643	-2.80%	1.86%
			5510	4.837	36.284	4.973	35.632	-2.73%	1.83%
			5520	4.851	36.257	4.983	35.620	-2.65%	1.79%
			5530	4.865	36.229	4.994	35.609	-2.58%	1.74%
			5540	4.880	36.215	5.004	35.597	-2.48%	1.74%
			5550	4.895	36.210	5.014	35.586	-2.37%	1.75%
			5560	4.907	36.200	5.024	35.574	-2.33%	1.76%
			5580	4.921	36.175	5.045	35.551	-2.46%	1.76%
			5600	4.942	36.126	5.065	35.529	-2.43%	1.68%
			5610	4.956	36.098	5.076	35.518	-2.36%	1.63%
			5620	4.970	36.082	5.086	35.506	-2.28%	1.62%
			5640	4.999	36.044	5.106	35.483	-2.10%	1.58%
			5660	5.026	36.019	5.127	35.460	-1.97%	1.58%
			5670	5.035	36.008	5.137	35.449	-1.99%	1.58%
			5680	5.043	35.995	5.147	35.437	-2.02%	1.57%
			5690	5.051	35.972	5.158	35.426	-2.07%	1.54%
			5700	5.064	35.943	5.168	35.414	-2.01%	1.49%
			5710	5.076	35.913	5.178	35.403	-1.97%	1.44%
			5720	5.090	35.893	5.188	35.391	-1.89%	1.42%
			5745	5.126	35.871	5.214	35.363	-1.69%	1.44%
			5750	5.132	35.866	5.219	35.357	-1.67%	1.44%
			5755	5.137	35.861	5.224	35.351	-1.67%	1.44%
			5765	5.145	35.845	5.234	35.340	-1.70%	1.43%
			5775	5.154	35.832	5.245	35.329	-1.73%	1.42%
			5785	5.166	35.811	5.255	35.317	-1.69%	1.40%
			5795	5.178	35.792	5.265	35.305	-1.65%	1.38%
			5805	5.188	35.785	5.275	35.294	-1.65%	1.33%
			5825	5.216	35.735	5.296	35.271	-1.51%	1.32%
			5835	5.230	35.719	5.305	35.230	-1.41%	1.39%
			5845	5.242	35.696	5.315	35.210	-1.37%	1.38%
			5850	5.246	35.691	5.320	35.200	-1.39%	1.39%
			5855	5.250	35.681	5.325	35.197	-1.41%	1.38%
			5875	5.271	35.654	5.347	35.183	-1.42%	1.34%
			5885	5.281	35.636	5.357	35.177	-1.42%	1.30%
			5905	5.304	35.601	5.379	35.163	-1.39%	1.25%
02/03/2025	5200-5800 Head	24.2	5150	4.450	36.504	4.608	36.050	-3.43%	1.26%
			5160	4.461	36.493	4.618	36.040	-3.40%	1.26%
			5170	4.468	36.479	4.629	36.030	-3.48%	1.25%
			5180	4.477	36.463	4.635	36.009	-3.41%	1.23%
			5190	4.488	36.428	4.645	35.998	-3.38%	1.19%
			5200	4.500	36.404	4.655	35.986	-3.33%	1.16%
			5210	4.513	36.383	4.666	35.975	-3.28%	1.13%
			5220	4.525	36.361	4.676	35.963	-3.23%	1.11%
			5240	4.548	36.337	4.696	35.940	-3.15%	1.10%
			5250	4.559	36.327	4.706	35.929	-3.12%	1.11%
			5260	4.571	36.317	4.717	35.917	-3.10%	1.11%
			5270	4.582	36.305	4.727	35.906	-3.07%	1.11%
			5280	4.590	36.285	4.737	35.894	-3.10%	1.09%
			5290	4.596	36.260	4.748	35.883	-3.20%	1.05%
			5300	4.604	36.232	4.758	35.871	-3.24%	1.01%
			5310	4.618	36.211	4.768	35.860	-3.19%	0.98%
			5320	4.630	36.198	4.778	35.849	-3.10%	0.97%
			5500	4.823	35.913	4.963	35.643	-2.82%	0.76%
			5510	4.837	35.880	4.973	35.632	-2.73%	0.70%
			5520	4.853	35.851	4.983	35.620	-2.61%	0.65%
			5530	4.869	35.830	4.994	35.609	-2.50%	0.62%
			5540	4.884	35.817	5.004	35.597	-2.40%	0.62%
			5550	4.897	35.813	5.014	35.586	-2.33%	0.64%
			5560	4.906	35.810	5.024	35.574	-2.35%	0.66%
			5580	4.921	35.777	5.045	35.551	-2.46%	0.64%
			5600	4.939	35.723	5.065	35.529	-2.49%	0.55%
			5610	4.952	35.697	5.076	35.518	-2.44%	0.52%
			5620	4.969	35.677	5.086	35.506	-2.30%	0.48%
			5640	4.997	35.657	5.106	35.483	-2.13%	0.49%
			5660	5.021	35.625	5.127	35.460	-2.07%	0.47%
			5670	5.030	35.609	5.137	35.449	-2.08%	0.45%
			5680	5.037	35.599	5.147	35.437	-2.14%	0.46%
			5690	5.048	35.581	5.158	35.426	-2.13%	0.44%
			5700	5.061	35.552	5.168	35.414	-2.07%	0.39%
			5710	5.074	35.528	5.178	35.403	-2.01%	0.35%
			5720	5.085	35.512	5.188	35.391	-1.99%	0.34%
			5745	5.117	35.482	5.214	35.363	-1.86%	0.34%
			5750	5.122	35.476	5.219	35.357	-1.86%	0.34%
			5755	5.127	35.468	5.224	35.351	-1.86%	0.33%
			5765	5.137	35.457	5.234	35.340	-1.85%	0.33%
			5775	5.147	35.441	5.245	35.329	-1.87%	0.32%
			5785	5.158	35.428	5.255	35.317	-1.85%	0.31%
			5795	5.170	35.410	5.265	35.305	-1.80%	0.30%
			5805	5.181	35.390	5.275	35.294	-1.78%	0.27%
			5825	5.206	35.350	5.296	35.271	-1.70%	0.22%
			5835	5.218	35.331	5.305	35.230	-1.64%	0.29%
			5845	5.229	35.306	5.315	35.210	-1.62%	0.27%
			5850	5.234	35.296	5.320	35.200	-1.62%	0.27%
			5855	5.239	35.292	5.325	35.197	-1.62%	0.27%
			5875	5.263	35.278	5.347	35.183	-1.57%	0.26%
			5885	5.272	35.267	5.357	35.177	-1.59%	0.26%
			5905	5.291	35.227	5.379	35.163	-1.64%	0.18%
02/10/2025	5200-5800 Head	19.0	5150	4.447	35.401	4.608	36.050	-3.49%	-1.80%
			5160	4.464	35.388	4.618	36.040	-3.33%	-1.81%
			5170	4.475	35.380	4.629	36.030	-3.33%	-1.80%
			5180	4.482	35.369	4.635	36.009	-3.30%	-1.78%
			5190	4.488	35.355	4.645	35.998	-3.38%	-1.79%
			5200	4.496	35.335	4.655	35.986	-3.42%	-1.81%
			5210	4.506	35.310	4.666	35.975	-3.43%	-1.85%
			5220	4.517	35.274	4.676	35.963	-3.40%	-1.92%
			5240	4.550	35.231	4.696	35.940	-3.11%	-1.97%
			5250	4.563	35.207	4.706	35.929	-3.04%	-2.01%
			5260	4.574	35.200	4.717	35.917	-3.03%	-2.00%
			5270	4.583	35.190	4.727	35.906	-3.05%	-1.99%
			5280	4.593	35.189	4.737	35.894	-3.04%	-1.98%
			5290	4.600	35.181	4.748	35.883	-3.12%	-1.98%
			5300	4.604	35.148	4.758	35.871	-3.24%	-2.02%
			5310	4.614	35.112	4.768	35.860	-3.23%	-2.09%
			5320	4.627	35.078	4.778	35.849	-3.16%	-2.15%
			5500	4.825	34.733	4.963	35.643	-2.78%	-2.55%
			5510	4.841	34.707	4.973	35.632	-2.65%	-2.60%
			5520	4.859	34.684	4.983	35.620	-2.49%	-2.60%
			5530	4.874	34.683	4.994	35.609	-2.40%	-2.60%
			5540	4.883	34.680	5.004	35.597	-2.42%	-2.58%
			5550	4.893	34.670	5.014	35.586	-2.41%	-2.57%
			5560	4.900	34.663	5.024	35.574	-2.47%	-2.58%
			5580	4.918	34.611	5.045	35.551	-2.52%	-2.64%
			5600	4.947	34.547	5.065	35.529	-2.33%	-2.76%
			5610	4.962	34.517	5.076	35.518	-2.25%	-2.82%
			5620	4.977	34.500	5.086	35.506	-2.14%	-2.83%
			5640	5.003	34.467	5.106	35.483	-2.02%	-2.78%
			5660	5.018	34.472	5.127	35.460	-2.13%	-2.79%
			5670	5.027	34.440	5.137	35.449	-2.14%	-2.85%
			5680	5.037	34.410	5.147	35.437	-2.14%	-2.90%
			5690	5.052	34.378	5.158	35.426	-2.06%	-2.96%
			5700	5.069	34.350	5.168	35.414	-1.92%	-3.00%
			5710	5.085	34.337	5.178	35.403	-1.80%	-3.01%
			5720	5.100	34.332	5.188	35.391	-1.70%	-2.99%
			5745	5.119	34.314	5.214	35.363	-1.82%	-2.97%
			5750	5.123	34.301	5.219	35.357	-1.84%	-2.99%
			5755	5.127	34.284	5.224	35.351	-1.86%	-3.02%
			5765	5.137	34.254	5.234	35.340	-1.85%	-3.07%
			5775	5.149	34.219	5.245	35.329	-1.83%	-3.14%
			5785	5.163	34.190	5.255	35.317	-1.75%	-3.19%
			5795	5.179	34.173	5.265	35.305	-1.63%	-3.21%
			5805	5.192	34.164	5.275	35.294	-1.57%	-3.20%
			5825	5.220	34.176	5.296	35.271	-1.44%	-3.10%
			5835	5.225	34.166	5.305	35.230	-1.51%	-3.02%
			5845	5.231	34.128	5.315	35.210	-1.58%	-3.04%
			5850	5.233	34.127	5.320	35.200	-1.64%	-3.05%
			5855	5.236	34.112	5.325	35.197	-1.67%	-3.08%
			5875	5.259	34.051	5.347	35.183	-1.65%	-3.22%
			5885	5.273	34.017	5.357	35.177	-1.57%	-3.30%
			5905	5.308	33.983	5.379	35.163	-1.32%	-3.36%

Table 11-6
Measured Head Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ε	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ε	% dev σ	% dev ε
01/27/2025	6000 Head	20.0	5935	5.211	34.775	5.411	35.143	-3.70%	-1.05%
			5970	5.229	34.587	5.448	35.120	-4.02%	-1.52%
			5985	5.267	34.529	5.464	35.110	-3.61%	-1.65%
			6000	5.301	34.542	5.480	35.100	-3.27%	-1.59%
			6025	5.295	34.491	5.510	35.070	-3.90%	-1.65%
			6065	5.364	34.308	5.557	35.022	-3.47%	-2.04%
			6075	5.385	34.281	5.569	35.010	-3.30%	-2.08%
			6085	5.413	34.278	5.580	34.998	-2.99%	-2.06%
			6185	5.535	34.174	5.698	34.878	-2.86%	-2.02%
			6275	5.626	34.017	5.805	34.770	-3.08%	-2.17%
			6285	5.639	34.021	5.816	34.758	-3.04%	-2.12%
			6305	5.669	34.070	5.840	34.734	-2.93%	-1.91%
			6345	5.688	33.913	5.887	34.686	-3.38%	-2.23%
			6475	5.860	33.640	6.041	34.530	-3.00%	-2.58%
			6485	5.876	33.633	6.052	34.518	-2.91%	-2.56%
			6500	5.878	33.671	6.070	34.500	-3.16%	-2.40%
			6505	5.885	33.677	6.076	34.494	-3.14%	-2.37%
			6545	5.927	33.506	6.122	34.446	-3.19%	-2.73%
			6665	6.106	33.283	6.265	34.302	-2.54%	-2.97%
			6675	6.111	33.312	6.273	34.290	-2.58%	-2.85%
			6685	6.116	33.369	6.285	34.278	-2.69%	-2.65%
			6715	6.138	33.241	6.319	34.242	-2.86%	-2.92%
			6785	6.235	33.176	6.400	34.158	-2.58%	-2.87%
			6825	6.228	32.971	6.447	34.110	-3.40%	-3.34%
			6985	6.441	32.773	6.633	33.918	-2.89%	-3.38%
			6995	6.441	32.724	6.644	33.906	-3.06%	-3.49%
			7000	6.432	32.690	6.650	33.900	-3.28%	-3.57%
			7005	6.418	32.660	6.656	33.894	-3.58%	-3.64%
			7025	6.416	32.573	6.680	33.870	-3.95%	-3.83%
02/05/2025	6000 Head	21.1	5935	5.174	34.673	5.411	35.143	-4.38%	-1.34%
			5970	5.213	34.614	5.448	35.120	-4.31%	-1.44%
			5985	5.236	34.595	5.464	35.110	-4.17%	-1.47%
			6000	5.246	34.591	5.480	35.100	-4.27%	-1.45%
			6025	5.290	34.552	5.510	35.070	-3.99%	-1.48%
			6065	5.331	34.464	5.557	35.022	-4.07%	-1.59%
			6075	5.344	34.451	5.569	35.010	-4.04%	-1.60%
			6085	5.356	34.460	5.580	34.998	-4.01%	-1.54%
			6185	5.473	34.283	5.698	34.878	-3.95%	-1.71%
			6275	5.587	34.137	5.805	34.770	-3.76%	-1.82%
			6285	5.607	34.101	5.816	34.758	-3.59%	-1.89%
			6305	5.621	34.086	5.840	34.734	-3.75%	-1.87%
			6345	5.682	33.983	5.887	34.686	-3.48%	-2.03%
			6475	5.823	33.880	6.041	34.530	-3.61%	-1.88%
			6485	5.831	33.899	6.052	34.518	-3.65%	-1.79%
			6500	5.837	33.850	6.070	34.500	-3.84%	-1.88%
			6505	5.838	33.825	6.076	34.494	-3.92%	-1.94%
			6545	5.912	33.651	6.122	34.446	-3.43%	-2.31%
			6665	6.051	33.479	6.265	34.302	-3.42%	-2.40%
			6675	6.059	33.474	6.273	34.290	-3.41%	-2.38%
			6685	6.068	33.449	6.285	34.278	-3.45%	-2.42%
			6715	6.106	33.322	6.319	34.242	-3.37%	-2.69%
			6785	6.184	33.320	6.400	34.158	-3.38%	-2.45%
			6825	6.221	33.252	6.447	34.110	-3.51%	-2.52%
			6985	6.434	32.986	6.633	33.918	-3.00%	-2.75%
			6995	6.435	32.991	6.644	33.906	-3.15%	-2.70%
			7000	6.432	32.992	6.650	33.900	-3.28%	-2.68%
			7005	6.428	32.990	6.656	33.894	-3.43%	-2.67%
02/21/2025	6000 Head	20.4	5935	5.166	36.113	5.411	35.143	-4.53%	2.76%
			5970	5.186	35.958	5.448	35.120	-4.81%	2.39%
			5985	5.218	35.893	5.464	35.110	-4.50%	2.23%
			6000	5.268	35.940	5.480	35.100	-3.87%	2.39%
			6025	5.287	35.941	5.510	35.070	-4.05%	2.48%
			6065	5.350	35.797	5.557	35.022	-3.73%	2.21%
			6075	5.369	35.749	5.569	35.010	-3.59%	2.11%
			6085	5.391	35.724	5.580	34.998	-3.39%	2.07%
			6185	5.497	35.579	5.698	34.878	-3.53%	2.01%
			6275	5.591	35.413	5.805	34.770	-3.69%	1.85%
			6285	5.602	35.428	5.816	34.758	-3.68%	1.93%
			6305	5.634	35.434	5.840	34.734	-3.53%	2.02%
			6345	5.665	35.306	5.887	34.686	-3.77%	1.79%
			6475	5.835	35.081	6.041	34.530	-3.41%	1.60%
			6485	5.844	35.070	6.052	34.518	-3.44%	1.60%
			6500	5.851	35.076	6.070	34.500	-3.61%	1.67%
			6505	5.855	35.081	6.076	34.494	-3.64%	1.70%
			6545	5.899	34.933	6.122	34.446	-3.64%	1.41%
			6665	6.085	34.737	6.265	34.302	-2.87%	1.27%
			6675	6.091	34.756	6.273	34.290	-2.90%	1.36%
			6685	6.096	34.811	6.285	34.278	-3.01%	1.55%
			6715	6.128	34.704	6.319	34.242	-3.02%	1.35%
			6785	6.225	34.660	6.400	34.158	-2.73%	1.47%
			6825	6.231	34.476	6.447	34.110	-3.35%	1.07%
			6985	6.438	34.198	6.633	33.918	-2.94%	0.83%
			6995	6.444	34.157	6.644	33.906	-3.01%	0.74%
			7000	6.435	34.127	6.650	33.900	-3.23%	0.67%
			7005	6.421	34.107	6.656	33.894	-3.53%	0.63%
			7025	6.420	34.053	6.680	33.870	-3.89%	0.54%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2. The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

11.2 SAR Test System Verification

Prior to SAR assessment, the system is verified to ±10% of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in SAR System Validation Appendix.

Table 11-7
System Verification Results – Head

System Verification TARGET & MEASURED																				
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	DAE	Measured SAR 1g (W/kg)	1W Target SAR 1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation 1g (%)	Measured SAR 10g (W/kg)	1W Target SAR 10g (W/kg)	1W Normalized SAR 10g (W/kg)	Deviation 10g (%)	Measured 4cm² APD (W/m²)	1W Target 4cm² APD (W/m²)	1W Normalized 4cm² APD	Deviation 4cm² APD (%)
G	13	HEAD	01/13/2025	23.0	19.0	1.00	1002	7551	1323	0.55	0.52	0.55	6.15%	0.34	0.33	0.34	5.23%	N/A	N/A	N/A	N/A
K4	750	HEAD	01/08/2025	19.8	22.0	0.20	1046	7547	1322	1.76	8.75	8.80	0.57%	1.17	5.69	5.85	2.81%	N/A	N/A	N/A	N/A
K6	750	HEAD	01/17/2025	21.5	21.9	0.20	1046	7402	1502	1.72	8.75	8.60	-1.71%	1.15	5.69	5.75	1.05%	N/A	N/A	N/A	N/A
K3	750	HEAD	01/22/2025	19.4	19.7	0.20	1046	7558	1364	1.67	8.75	8.35	-4.57%	1.11	5.69	5.55	-2.46%	N/A	N/A	N/A	N/A
K3	750	HEAD	02/03/2025	21.5	21.6	0.20	1046	7558	1364	1.69	8.75	8.45	-3.43%	1.13	5.69	5.65	-0.70%	N/A	N/A	N/A	N/A
K6	750	HEAD	02/05/2025	20.5	21.9	0.20	1003	7402	1502	1.73	8.68	8.65	-0.35%	1.16	5.67	5.80	2.29%	N/A	N/A	N/A	N/A
K4	835	HEAD	01/08/2025	19.8	22.0	0.20	4d119	7547	1322	2.01	9.96	10.05	0.90%	1.33	6.48	6.65	2.62%	N/A	N/A	N/A	N/A
K6	835	HEAD	01/13/2025	21.2	22.0	0.20	4d119	7402	1502	2.03	9.96	10.15	1.91%	1.36	6.48	6.80	4.94%	N/A	N/A	N/A	N/A
K6	835	HEAD	01/15/2025	21.6	22.2	0.20	4d119	7402	1502	1.96	9.96	9.75	-1.61%	1.31	6.48	6.55	1.08%	N/A	N/A	N/A	N/A
K6	835	HEAD	01/20/2025	19.4	20.6	0.20	4d119	7402	1502	2.01	9.96	10.05	0.90%	1.34	6.48	6.70	3.40%	N/A	N/A	N/A	N/A
K6	835	HEAD	02/03/2025	20.0	19.0	0.20	4d119	7402	1502	1.97	9.96	9.85	-1.10%	1.32	6.48	6.60	1.85%	N/A	N/A	N/A	N/A
K6	835	HEAD	02/05/2025	20.5	21.9	0.20	4d119	7402	1502	2.01	9.96	10.05	0.90%	1.33	6.48	6.65	2.62%	N/A	N/A	N/A	N/A
K3	1750	HEAD	01/20/2025	20.8	21.9	0.10	1051	7558	1364	3.51	37.00	35.10	-5.14%	1.88	19.50	18.80	-3.59%	N/A	N/A	N/A	N/A
L	1750	HEAD	01/22/2025	24.1	24.8	0.10	1150	7660	1678	3.79	36.40	37.90	4.12%	2.09	19.40	20.90	7.73%	N/A	N/A	N/A	N/A
K3	1750	HEAD	02/04/2025	19.6	20.1	0.10	1051	7558	1364	3.80	37.00	38.00	2.70%	2.04	19.50	20.40	4.62%	N/A	N/A	N/A	N/A
L	1750	HEAD	02/06/2025	23.8	22.1	0.10	1150	7660	1678	3.57	36.40	35.70	-1.92%	1.92	19.40	19.20	-1.03%	N/A	N/A	N/A	N/A
L	1750	HEAD	02/12/2025	20.1	20.0	0.10	1150	7660	1678	3.79	36.40	37.90	4.12%	2.02	19.40	20.20	4.12%	N/A	N/A	N/A	N/A
L	1750	HEAD	02/18/2025	19.0	19.0	0.10	1150	7660	1678	3.73	36.40	37.30	2.47%	2.00	19.40	20.00	3.09%	N/A	N/A	N/A	N/A
L	1900	HEAD	01/15/2025	20.9	21.9	0.10	Sd148	7660	1678	3.99	40.10	39.90	-0.50%	2.12	21.00	21.20	0.95%	N/A	N/A	N/A	N/A
K3	1900	HEAD	01/20/2025	20.8	21.9	0.10	Sd141	7558	1364	4.10	40.30	41.00	1.74%	2.13	21.00	21.30	1.43%	N/A	N/A	N/A	N/A
L	1900	HEAD	02/04/2025	20.9	21.9	0.10	Sd149	7660	1678	4.24	39.10	42.40	8.44%	2.23	20.70	22.30	7.73%	N/A	N/A	N/A	N/A
K3	1900	HEAD	02/04/2025	19.6	20.1	0.10	Sd141	7558	1364	4.18	40.30	41.80	3.72%	2.17	21.00	21.70	3.33%	N/A	N/A	N/A	N/A
L	1900	HEAD	02/06/2025	23.8	22.1	0.10	Sd149	7660	1678	4.11	39.10	41.10	5.12%	2.13	20.70	21.30	2.90%	N/A	N/A	N/A	N/A
K4	1900	HEAD	02/06/2025	20.3	20.3	0.10	Sd141	7547	1322	4.22	40.30	42.20	4.71%	2.20	21.00	22.00	4.76%	N/A	N/A	N/A	N/A
L	1900	HEAD	02/18/2025	19.0	19.0	0.10	Sd149	7660	1678	4.15	39.10	41.50	6.14%	2.15	20.70	21.50	3.86%	N/A	N/A	N/A	N/A
P	2300	HEAD	02/12/2025	24.2	24.2	0.10	1073	7571	859	4.93	48.60	49.30	1.44%	2.38	23.70	23.80	0.42%	N/A	N/A	N/A	N/A
P	2300	HEAD	02/18/2025	19.5	20.5	0.10	1116	7571	859	4.72	49.20	47.20	-4.07%	2.27	23.90	22.70	-5.02%	N/A	N/A	N/A	N/A
P	2300	HEAD	02/20/2025	21.3	20.2	0.10	1116	7571	859	4.62	49.20	46.20	-6.10%	2.25	23.90	22.50	-5.86%	N/A	N/A	N/A	N/A
O	2450	HEAD	01/13/2025	22.2	21.5	0.10	719	3914	728	5.19	52.20	51.90	-0.57%	2.41	24.60	24.10	-2.03%	N/A	N/A	N/A	N/A
O	2450	HEAD	01/28/2025	22.7	22.0	0.10	719	3914	728	5.29	52.20	52.90	1.34%	2.47	24.60	24.70	0.41%	N/A	N/A	N/A	N/A
O	2450	HEAD	02/10/2025	21.3	20.8	0.10	719	3914	728	5.25	52.20	52.50	0.57%	2.45	24.60	24.50	-0.41%	N/A	N/A	N/A	N/A
P	2450	HEAD	02/12/2025	24.2	24.2	0.10	719	7571	859	5.25	52.20	52.50	0.57%	2.46	24.60	24.60	0.00%	N/A	N/A	N/A	N/A
O	2450	HEAD	02/18/2025	20.0	20.8	0.10	719	3914	728	5.18	52.20	51.80	-0.77%	2.41	24.60	24.10	-2.03%	N/A	N/A	N/A	N/A
O	2600	HEAD	01/13/2025	22.2	21.5	0.10	1071	3914	728	5.70	56.50	57.00	0.88%	2.56	25.40	25.60	0.79%	N/A	N/A	N/A	N/A
P	2600	HEAD	02/12/2025	24.2	24.2	0.10	1071	7571	859	5.60	56.50	56.00	-0.88%	2.54	25.40	25.40	0.00%	N/A	N/A	N/A	N/A
K2	3500	HEAD	01/20/2025	20.6	19.5	0.10	1068	7491	1532	6.81	65.10	68.10	4.61%	2.63	24.70	26.30	6.48%	N/A	N/A	N/A	N/A
K2	3500	HEAD	01/22/2025	20.2	20.1	0.10	1068	7491	1532	6.64	65.10	66.40	2.00%	2.56	24.70	25.60	3.64%	N/A	N/A	N/A	N/A
K4	3500	HEAD	01/22/2025	19.6	20.5	0.10	1127	7547	1322	6.26	65.60	62.60	-4.57%	2.35	24.80	23.50	-5.24%	N/A	N/A	N/A	N/A
E	3500	HEAD	02/18/2025	20.8	19.0	0.10	1059	7409	1334	6.52	64.90	65.20	0.46%	2.50	24.70	25.00	1.21%	N/A	N/A	N/A	N/A
K4	3500	HEAD	02/19/2025	19.5	19.1	0.10	1127	7547	1322	6.34	65.60	63.40	-3.35%	2.43	24.80	24.30	-2.02%	N/A	N/A	N/A	N/A
K2	3700	HEAD	01/20/2025	20.6	19.5	0.10	1029	7491	1532	6.90	68.80	69.00	0.29%	2.58	25.30	25.80	1.98%	N/A	N/A	N/A	N/A
K2	3700	HEAD	01/22/2025	20.2	20.1	0.10	1029	7491	1532	7.06	68.80	70.60	2.62%	2.66	25.30	26.60	5.14%	N/A	N/A	N/A	N/A
K4	3700	HEAD	01/22/2025	19.6	20.5	0.10	1096	7547	1322	6.58	67.60	65.80	-2.66%	2.40	24.70	24.00	-2.83%	N/A	N/A	N/A	N/A
E	3700	HEAD	02/18/2025	20.8	19.0	0.10	1018	7409	1334	6.16	65.10	61.60	-5.38%	2.30	23.90	23.00	-3.77%	N/A	N/A	N/A	N/A
K4	3700	HEAD	02/19/2025	19.5	19.1	0.10	1096	7547	1322	6.85	67.60	68.50	1.33%	2.54	24.70	25.40	2.83%	N/A	N/A	N/A	N/A
K4	3900	HEAD	01/22/2025	19.6	20.5	0.10	1074	7547	1322	6.37	68.70	63.70	-7.28%	2.22	24.00	22.20	-7.50%	N/A	N/A	N/A	N/A
K4	3900	HEAD	02/19/2025	19.5	19.1	0.10	1074	7547	1322	6.93	68.70	69.30	0.87%	2.45	24.00	24.50	2.08%	N/A	N/A	N/A	N/A
S	5250	HEAD	01/20/2025	19.1	22.2	0.05	1057	7803	1583	3.70	79.40	74.00	-6.80%	1.06	22.70	21.20	-6.61%	N/A	N/A	N/A	N/A
G	5250	HEAD	02/03/2025	23.3	24.2	0.05	1057	7551	1323	3.65	79.40	73.00	-8.06%	1.03	22.70	20.60	-9.25%	N/A	N/A	N/A	N/A
S	5250	HEAD	02/10/2025	21.2	19.0	0.05	1191	7803	1583	3.80	78.90	76.00	-3.68%	1.11	22.70	22.20	-2.20%	N/A	N/A	N/A	N/A
S	5600	HEAD	01/20/2025	19.1	22.2	0.05	1057	7803	1583	3.79	82.80	75.80	-8.45%	1.07	23.60	21.40	-9.32%	N/A	N/A	N/A	N/A
G	5600	HEAD	02/03/2025	23.3	24.2	0.05	1057	7551	1323	3.80	82.80	76.00	-8.21%	1.07	23.60	21.40	-9.32%	N/A	N/A	N/A	N/A
S	5600	HEAD	02/10/2025	21.2	19.0	0.05	1191	7803	1583	4.04	83.00	80.80	-2.65%	1.18	23.90	23.60	-1.26%	N/A	N/A	N/A	N/A
S	5750	HEAD	01/20/2025	19.1	22.2	0.05	1057	7803	1583	3.60	79.80	72.00	-9.77%	1.03	22.70	20.60	-9.25%	N/A	N/A	N/A	N/A
G	5750	HEAD	02/03/2025	23.3	24.2	0.05	1057	7551	1323	3.75	79.80	75.00	-6.02%	1.06	22.70	21.20	-6.61%	N/A	N/A	N/A	N/A
S	5750	HEAD	02/10/2025	21.2	19.0	0.05	1191	7803	1583	3.92	78.90	78.40	-0.63%	1.13	22.40	22.60	0.89%	N/A	N/A	N/A	N/A
S	5850	HEAD	01/20/2025	19.1	22.2	0.05	1057	7803	1583	3.81	81.50	76.20	-6.50%	1.07	23.00	21.40	-6.96%	N/A	N/A	N/A	N/A
G	5850	HEAD	02/03/2025	23.3	24.2	0.05	1057	7551	1323	3.78	81.50	75.60	-7.24%	1.05	23.00	21.00	-8.70%	N/A	N/A	N/A	N/A
S	5850	HEAD	02/10/2025	21.2	19.0	0.05	1191	7803	1583	4.05	78.80	81.00	2.79%	1.16	22.50	23.20	3.11%	N/A	N/A	N/A	N/A
R	6500	HEAD	01/27/2025	19.7	19.4	0.03	1111	7527	1272	7.31	291.00	292.40	0.48%	1.35	53.50	54.00	0.93%	32.70	1300.00	1308.00	0.62%
R	6500	HEAD	02/05/2025	20.9	20.1	0.03	1018	7527	1272	7.17	292.00	286.80	-1.78%	1.33	53.90	53.20	-1.30%	32.30	1310.00	1292.00	-1.37%
R	6500	HEAD	02/21/2025	19.5	19.6	0.03	1018	7527	1272	7.65	292.00	306.00	4.79%	1.40	53.90	56.00	3.90%	34.00	1310.00	1360.00	3.82%

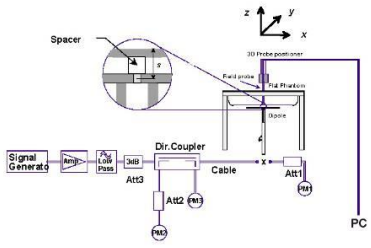


Figure 11-1
System Verification Setup Diagram

Figure 11-2
System Verification Setup Photo

11.3 Power Density Test System Verification

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

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

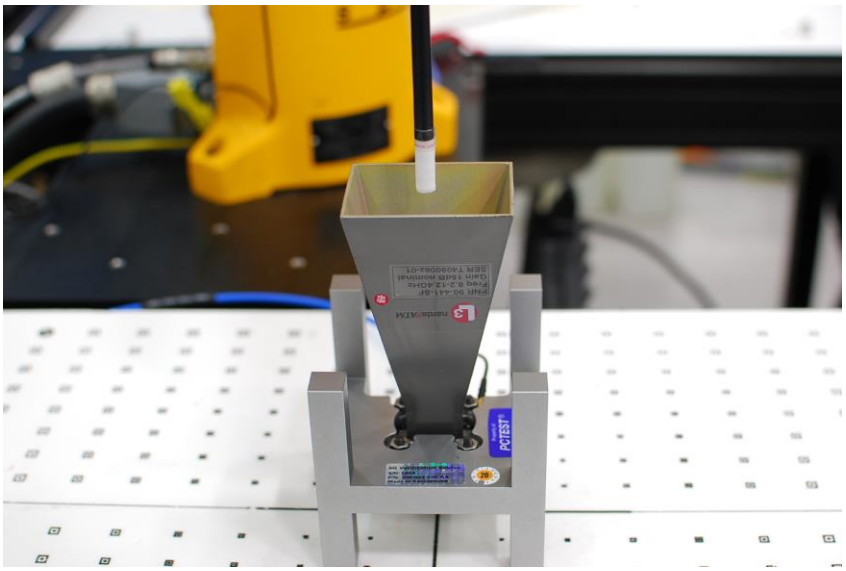


Figure 11-3
System Verification Setup Photo

Table 11-8
10 GHz Verifications

System Verification											
System	Frequency (GHz)	Date	Source S/N	Probe S/N	Prad (mW)	Normal psPD (W/m² over 4 cm²)		Deviation (dB)	Total psPD (W/m² over 4 cm²)		Deviation (dB)
						Measured	Target		Measured	Target	
Q	10	02/18/2025	1002	9389	93.3	52.50	54.60	-0.17	53.00	54.90	-0.15

Note: A **10 mm distance spacing** was used from the reference horn antenna aperture to the probe element.

12 SAR DATA SUMMARY

12.1 GSM 850 Standalone SAR

Table 12-1 Plot A1

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	GSM 850	GSM	1	1964M	1:8.3	0.00	836.60	190	34.0	33.15	Right Cheek	0	0.230	1.216	0.280	0.280	0.175	Plot	29.0		
Head	GSM 850	GSM	1	1964M	1:8.3	-0.05	836.60	190	34.0	33.15	Right Tilt	0	0.109	1.216	0.133	0.133	0.083		32.2	29.0	24.4
Head	GSM 850	GSM	1	1964M	1:8.3	0.03	836.60	190	34.0	33.15	Left Cheek	0	0.167	1.216	0.203	0.203	0.127		30.4		
Head	GSM 850	GSM	1	1964M	1:8.3	-0.04	836.60	190	34.0	33.15	Left Tilt	0	0.090	1.216	0.109	0.109	0.068		33.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-2 Plot A2

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	-0.04	824.20	128	26.9	25.25	Back	5	0.518	1.462	0.757	0.757	0.473		23.7		
Body-worn/Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	-0.06	836.60	190	26.9	25.42	Back	5	0.684	1.406	0.962	0.962	0.601		22.7		
Body-worn/Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	-0.07	848.80	251	26.9	25.50	Back	5	0.710	1.380	0.980	0.980	0.613	Plot	22.6		
Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	-0.06	848.80	251	26.9	25.50	Front	5	0.259	1.380	0.357	0.357	0.223		27.0	22.6	22.5
Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	-0.02	848.80	251	26.9	25.50	Bottom	10	0.156	1.380	0.215	0.215	0.134		29.2		
Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	0.00	848.80	251	26.9	25.50	Right	10	0.099	1.380	0.137	0.137	0.086		31.2		
Hotspot	GPRS 850	GPRS 4 Tx Slots	1	1964M	1:2.076	0.07	848.80	251	26.9	25.50	Left	10	0.049	1.380	0.068	0.068	0.043		34.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.2 GSM 1900 Standalone SAR

Table 12-3 Plot A3

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	GSM 1900	GSM	2	2040M	1:8.3	0.04	1909.80	810	29.0	27.59	Right Cheek	0	0.097	1.384	0.134	0.134	0.084		27.2		
Head	GSM 1900	GSM	2	2040M	1:8.3	-0.08	1909.80	810	29.0	27.59	Right Tilt	0	0.061	1.384	0.084	0.084	0.053		29.2	26.5	18.5
Head	GSM 1900	GSM	2	2040M	1:8.3	0.19	1909.80	810	29.0	27.59	Left Cheek	0	0.112	1.384	0.155	0.155	0.097	Plot	26.5		
Head	GSM 1900	GSM	2	2040M	1:8.3	0.08	1909.80	810	29.0	27.59	Left Tilt	0	0.090	1.384	0.125	0.125	0.078		27.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-4 Plot A4

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	-0.09	1850.20	512	23.9	22.45	Back	5	0.679	1.396	0.948	0.948	0.593		19.7		
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	-0.04	1880.00	661	23.9	22.65	Back	5	0.693	1.334	0.924	0.924	0.578	Plot	19.9		
Body-worn/Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	0.00	1909.80	810	23.9	22.51	Back	5	0.632	1.377	0.870	0.870	0.544		20.1	19.7	19.5
Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	-0.07	1880.00	661	23.9	22.65	Front	5	0.529	1.334	0.706	0.706	0.441		21.0		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	0.03	1880.00	661	23.9	22.65	Bottom	10	0.271	1.334	0.362	0.362	0.226		23.9		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	2	2040M	1:2.076	-0.13	1880.00	661	23.9	22.65	Left	10	0.134	1.334	0.179	0.179	0.112		27.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.3 UMTS 850 Standalone SAR

Table 12-5 Plot A5

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	UMTS 850	RMC	1	3744M	1:1	-0.01	826.40	4132	25.0	23.92	Right Cheek	0	0.266	1.282	0.341	0.341	0.213	Plot	28.7		
Head	UMTS 850	RMC	1	3744M	1:1	0.04	826.40	4132	25.0	23.92	Right Tilt	0	0.135	1.282	0.173	0.173	0.108		31.6		
Head	UMTS 850	RMC	1	3744M	1:1	0.01	826.40	4132	25.0	23.92	Left Cheek	0	0.216	1.282	0.277	0.277	0.173		29.6	28.7	24.9
Head	UMTS 850	RMC	1	3744M	1:1	0.02	826.40	4132	25.0	23.92	Left Tilt	0	0.119	1.282	0.153	0.153	0.096		32.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-6 Plot A6

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.05	826.40	4132	24.0	23.30	Back	5	0.690	1.175	0.811	0.811	0.507		23.9	23.0	23.0
Body-worn/Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.02	836.60	4183	24.0	23.26	Back	5	0.767	1.186	0.910	0.910	0.569		23.4		
Body-worn/Hotspot	UMTS 850	RMC	1	3744M	1:1	0.06	846.60	4233	24.0	23.07	Back	5	0.807	1.239	1.000	1.000	0.625	Plot	23.0		
Body-worn/Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.01	846.60	4233	24.0	23.07	Back	5	0.739	1.239	0.916	0.916	0.573		23.4		
Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.02	826.40	4132	24.0	23.30	Front	5	0.337	1.175	0.396	0.396	0.248		27.0		
Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.02	826.40	4132	24.0	23.30	Bottom	10	0.177	1.175	0.208	0.208	0.130		29.8		
Hotspot	UMTS 850	RMC	1	3744M	1:1	-0.02	826.40	4132	24.0	23.30	Right	10	0.184	1.175	0.216	0.216	0.135		29.6		
Hotspot	UMTS 850	RMC	1	3744M	1:1	0.04	826.40	4132	24.0	23.30	Left	10	0.090	1.175	0.106	0.106	0.066		32.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue entry represents variability measurement

12.4 UMTS 1750 Standalone SAR

Table 12-7 Plot A7

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	UMTS 1750	RMC	2	2040M	1:1	-0.12	1712.40	1312	24.5	23.31	Right Cheek	0	0.283	1.315	0.372	0.372	0.233	Plot	27.8	27.8	23.5
Head	UMTS 1750	RMC	2	2040M	1:1	0.03	1712.40	1312	24.5	23.31	Right Tilt	0	0.124	1.315	0.163	0.163	0.102		31.4		
Head	UMTS 1750	RMC	2	2040M	1:1	-0.07	1712.40	1312	24.5	23.31	Left Cheek	0	0.259	1.315	0.341	0.341	0.213		28.2		
Head	UMTS 1750	RMC	2	2040M	1:1	-0.17	1712.40	1312	24.5	23.31	Left Tilt	0	0.179	1.315	0.235	0.235	0.147		29.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-8 Plot A8

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.02	1712.40	1312	20.5	19.85	Back	5	0.722	1.161	0.838	0.838	0.524		20.2	20.0	19.5
Body-worn/Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.01	1732.40	1412	20.5	19.80	Back	5	0.756	1.175	0.888	0.888	0.555	Plot	20.0		
Body-worn/Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.01	1752.60	1513	20.5	19.57	Back	5	0.678	1.239	0.840	0.840	0.525		20.2		
Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.02	1712.40	1312	20.5	19.85	Front	5	0.534	1.161	0.620	0.620	0.388		21.6		
Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.03	1712.40	1312	20.5	19.85	Bottom	10	0.274	1.161	0.318	0.318	0.199		24.5		
Hotspot	UMTS 1750	RMC	2	2040M	1:1	-0.03	1712.40	1312	20.5	19.85	Left	10	0.195	1.161	0.226	0.226	0.141		25.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.5 UMTS 1900 Standalone SAR

Table 12-9 Plot A9

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	UMTS 1900	RMC	2	2040M	1:1	0.03	1907.60	9538	24.5	23.62	Right Cheek	0	0.329	1.225	0.403	0.403	0.252		27.4	26.6	23.5
Head	UMTS 1900	RMC	2	2040M	1:1	-0.08	1907.60	9538	24.5	23.62	Right Tilt	0	0.170	1.225	0.208	0.208	0.130		30.3		
Head	UMTS 1900	RMC	2	2040M	1:1	-0.04	1907.60	9538	24.5	23.62	Left Cheek	0	0.402	1.225	0.492	0.492	0.308	Plot	26.6		
Head	UMTS 1900	RMC	2	2040M	1:1	-0.05	1907.60	9538	24.5	23.62	Left Tilt	0	0.207	1.225	0.254	0.254	0.159		29.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-10 Plot A10

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.03	1852.40	9262	20.0	18.97	Back	5	0.639	1.268	0.810	0.810	0.506		19.9	19.7	19.0
Body-worn/Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.03	1880.00	9400	20.0	18.93	Back	5	0.638	1.279	0.816	0.816	0.510		19.9		
Body-worn/Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.02	1907.60	9538	20.0	19.03	Back	5	0.671	1.250	0.839	0.839	0.524	Plot	19.7		
Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.01	1907.60	9538	20.0	19.03	Front	5	0.511	1.250	0.639	0.639	0.399		20.9		
Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.07	1907.60	9538	20.0	19.03	Bottom	10	0.306	1.250	0.383	0.383	0.239		23.2		
Hotspot	UMTS 1900	RMC	2	2040M	1:1	-0.12	1907.60	9538	20.0	19.03	Left	10	0.135	1.250	0.169	0.169	0.106		26.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.6 LTE Band 71 Standalone SAR

Table 12-11 Plot A11

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.11	680.50	133297	0.0	25.0	23.64	1	99	Right Cheek	0	0.146	1.368	0.200	0.200	0.125		31.0	30.3	24.4
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.02	680.50	133297	1.0	24.0	22.64	50	50	Right Cheek	0	0.136	1.368	0.186	0.204	0.128		30.3		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	0.04	680.50	133297	0.0	25.0	23.64	1	99	Right Tilt	0	0.076	1.368	0.104	0.104	0.065		33.8		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.04	680.50	133297	1.0	24.0	22.64	50	50	Right Tilt	0	0.058	1.368	0.079	0.087	0.054		34.0		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.07	680.50	133297	0.0	25.0	23.64	1	99	Left Cheek	0	0.151	1.368	0.207	0.207	0.129	Plot	30.8		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.10	680.50	133297	1.0	24.0	22.64	50	50	Left Cheek	0	0.104	1.368	0.142	0.156	0.098		31.5		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.11	680.50	133297	0.0	25.0	23.64	1	99	Left Tilt	0	0.090	1.368	0.123	0.123	0.077		33.1		
Head	LTE Band 71	20	QPSK	1	3762M	1:1	-0.04	680.50	133297	1.0	24.0	22.64	50	50	Left Tilt	0	0.071	1.368	0.097	0.107	0.067		33.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-12 Plot A12

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 71	20	QPSK	1	1964M	1:1	-0.01	680.50	133297	0.0	25.0	23.64	1	99	Back	5	0.521	1.368	0.713	0.800	0.500	Plot	25.5	25.5	25.5
Body-worn/Hotspot	LTE Band 71	20	QPSK	1	1964M	1:1	-0.05	680.50	133297	1.0	24.0	22.64	50	50	Back	5	0.384	1.368	0.525	0.742	0.464		25.8		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.07	680.50	133297	0.0	25.0	23.64	1	99	Front	5	0.163	1.368	0.223	0.250	0.156		30.5		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	0.02	680.50	133297	1.0	24.0	22.64	50	50	Front	5	0.138	1.368	0.189	0.267	0.167		30.2		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.10	680.50	133297	0.0	25.0	23.64	1	99	Bottom	10	0.198	1.368	0.271	0.304	0.190		29.7		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.02	680.50	133297	1.0	24.0	22.64	50	50	Bottom	10	0.155	1.368	0.212	0.299	0.187		29.7		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.05	680.50	133297	0.0	25.0	23.64	1	99	Right	10	0.277	1.368	0.379	0.425	0.266		28.2		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	0.04	680.50	133297	1.0	24.0	22.64	50	50	Right	10	0.232	1.368	0.317	0.448	0.280		28.0		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.03	680.50	133297	0.0	25.0	23.64	1	99	Left	10	0.140	1.368	0.192	0.215	0.134		31.2		
Hotspot	LTE Band 71	20	QPSK	1	3744M	1:1	-0.04	680.50	133297	1.0	24.0	22.64	50	50	Left	10	0.127	1.368	0.174	0.245	0.153		30.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram									

12.7 LTE Band 12 Standalone SAR

Table 12-13 Plot A13

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 12	10	QPSK	1	3762M	1:1	0.00	707.50	23095	0.0	25.0	24.36	1	0	Right Cheek	0	0.185	1.159	0.214	0.214	0.134		30.7	30.6	24.5
Head	LTE Band 12	10	QPSK	1	3762M	1:1	0.13	707.50	23095	1.0	24.0	23.25	25	12	Right Cheek	0	0.147	1.189	0.175	0.196	0.123		30.6		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	0.05	707.50	23095	0.0	25.0	24.36	1	0	Right Tilt	0	0.095	1.159	0.110	0.110	0.069		33.6		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	-0.01	707.50	23095	1.0	24.0	23.25	25	12	Right Tilt	0	0.070	1.189	0.083	0.093	0.058		33.8		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	-0.07	707.50	23095	0.0	25.0	24.36	1	0	Left Cheek	0	0.188	1.159	0.218	0.218	0.136	Plot	30.6		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	-0.01	707.50	23095	1.0	24.0	23.25	25	12	Left Cheek	0	0.146	1.189	0.174	0.195	0.122		30.6		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	-0.02	707.50	23095	0.0	25.0	24.36	1	0	Left Tilt	0	0.099	1.159	0.115	0.115	0.072		33.4		
Head	LTE Band 12	10	QPSK	1	3762M	1:1	-0.03	707.50	23095	1.0	24.0	23.25	25	12	Left Tilt	0	0.077	1.189	0.092	0.103	0.064		33.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-14 Plot A14

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 12	10	QPSK	1	1964M	1:1	0.01	707.50	23095	0.0	25.0	24.36	1	0	Back	5	0.699	1.159	0.810	0.810	0.506	Plot	24.9	24.6	24.6
Body-worn/Hotspot	LTE Band 12	10	QPSK	1	1964M	1:1	-0.02	707.50	23095	1.0	24.0	23.25	25	12	Back	5	0.575	1.189	0.684	0.785	0.491		24.6		
Body-worn/Hotspot	LTE Band 12	10	QPSK	1	1964M	1:1	0.00	707.50	23095	1.0	24.0	23.21	50	0	Back	5	0.515	1.199	0.617	0.709	0.443		25.1		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.02	707.50	23095	0.0	25.0	24.36	1	0	Front	5	0.214	1.159	0.248	0.248	0.155		30.0		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	0.02	707.50	23095	1.0	24.0	23.25	25	12	Front	5	0.181	1.189	0.215	0.247	0.154		29.7		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.04	707.50	23095	0.0	25.0	24.36	1	0	Bottom	10	0.168	1.159	0.195	0.195	0.122		31.1		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.01	707.50	23095	1.0	24.0	23.25	25	12	Bottom	10	0.146	1.189	0.174	0.199	0.124		30.6		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.02	707.50	23095	0.0	25.0	24.36	1	0	Right	10	0.332	1.159	0.385	0.385	0.241		28.1		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	0.04	707.50	23095	1.0	24.0	23.25	25	12	Right	10	0.247	1.189	0.294	0.337	0.211		28.3		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.03	707.50	23095	0.0	25.0	24.36	1	0	Left	10	0.188	1.159	0.218	0.218	0.136		30.6		
Hotspot	LTE Band 12	10	QPSK	1	3744M	1:1	-0.06	707.50	23095	1.0	24.0	23.25	25	12	Left	10	0.142	1.189	0.169	0.194	0.121		30.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram									

12.8 LTE Band 13 Standalone SAR

Table 12-15 Plot A15

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 13	10	QPSK	1	3762M	1:1	-0.01	782.00	23230	0.0	25.0	24.44	1	25	Right Cheek	0	0.151	1.138	0.172	0.216	0.135	Plot	31.6	31.5	26.0
Head	LTE Band 13	10	QPSK	1	3762M	1:1	-0.05	782.00	23230	1.0	24.0	23.39	25	12	Right Cheek	0	0.123	1.151	0.142	0.224	0.140		31.5		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	-0.04	782.00	23230	0.0	25.0	24.44	1	25	Right Tilt	0	0.080	1.138	0.091	0.115	0.072		34.4		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	0.01	782.00	23230	1.0	24.0	23.39	25	12	Right Tilt	0	0.064	1.151	0.074	0.117	0.073		34.3		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	0.07	782.00	23230	0.0	25.0	24.44	1	25	Left Cheek	0	0.133	1.138	0.151	0.190	0.119		32.2		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	0.00	782.00	23230	1.0	24.0	23.39	25	12	Left Cheek	0	0.106	1.151	0.122	0.193	0.121		32.1		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	0.09	782.00	23230	0.0	25.0	24.44	1	25	Left Tilt	0	0.084	1.138	0.096	0.120	0.075		34.2		
Head	LTE Band 13	10	QPSK	1	3762M	1:1	-0.03	782.00	23230	1.0	24.0	23.39	25	12	Left Tilt	0	0.073	1.151	0.084	0.133	0.083		33.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-16 Plot A16

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 13	10	QPSK	1	2040M	1:1	-0.02	782.00	23230	0.0	24.0	23.07	1	25	Back	5	0.776	1.239	0.961	0.961	0.601		23.2		
Body-worn/Hotspot	LTE Band 13	10	QPSK	1	2040M	1:1	-0.01	782.00	23230	0.0	24.0	23.03	25	12	Back	5	0.763	1.250	0.954	0.954	0.596		23.2		
Body-worn/Hotspot	LTE Band 13	10	QPSK	1	2040M	1:1	0.00	782.00	23230	0.0	24.0	23.02	50	0	Back	5	0.803	1.253	1.006	1.006	0.629	Plot	23.0		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	0.01	782.00	23230	0.0	24.0	23.07	1	25	Front	5	0.248	1.239	0.307	0.307	0.192		28.1		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	-0.03	782.00	23230	0.0	24.0	23.03	25	12	Front	5	0.191	1.250	0.239	0.239	0.149		29.2		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	0.13	782.00	23230	0.0	24.0	23.07	1	25	Bottom	10	0.225	1.239	0.279	0.279	0.174		28.5	23.0	23.0
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	0.04	782.00	23230	0.0	24.0	23.03	25	12	Bottom	10	0.168	1.250	0.210	0.210	0.131		29.8		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	0.00	782.00	23230	0.0	24.0	23.07	1	25	Right	10	0.209	1.239	0.259	0.259	0.162		28.8		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	-0.10	782.00	23230	0.0	24.0	23.03	25	12	Right	10	0.165	1.250	0.206	0.206	0.129		29.8		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	-0.07	782.00	23230	0.0	24.0	23.07	1	25	Left	10	0.070	1.239	0.087	0.087	0.054		33.6		
Hotspot	LTE Band 13	10	QPSK	1	3744M	1:1	-0.21	782.00	23230	0.0	24.0	23.03	25	12	Left	10	0.055	1.250	0.069	0.069	0.043		34.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.9 LTE Band 14 Standalone SAR

Table 12-17 Plot A17

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 14	10	QPSK	1	3762M	1:1	-0.03	793.00	23330	0.0	25.0	24.52	1	0	Right Cheek	0	0.167	1.117	0.187	0.246	0.154	Plot	31.3		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	0.03	793.00	23330	1.0	24.0	23.49	25	0	Right Cheek	0	0.130	1.125	0.146	0.243	0.152		31.3		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	0.00	793.00	23330	0.0	25.0	24.52	1	0	Right Tilt	0	0.100	1.117	0.112	0.147	0.092		33.5		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	-0.06	793.00	23330	1.0	24.0	23.49	25	0	Right Tilt	0	0.077	1.125	0.087	0.144	0.090		33.6	31.3	26.2
Head	LTE Band 14	10	QPSK	1	3762M	1:1	0.08	793.00	23330	0.0	25.0	24.52	1	0	Left Cheek	0	0.150	1.117	0.168	0.221	0.138		31.7		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	-0.03	793.00	23330	1.0	24.0	23.49	25	0	Left Cheek	0	0.123	1.125	0.138	0.230	0.144		31.6		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	-0.05	793.00	23330	0.0	25.0	24.52	1	0	Left Tilt	0	0.085	1.117	0.095	0.125	0.078		34.2		
Head	LTE Band 14	10	QPSK	1	3762M	1:1	0.02	793.00	23330	1.0	24.0	23.49	25	0	Left Tilt	0	0.065	1.125	0.073	0.121	0.076		34.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-18 Plot A18

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 14	10	QPSK	1	2040M	1:1	-0.03	793.00	23330	0.0	24.0	23.25	1	0	Back	5	0.793	1.189	0.943	0.943	0.589		23.2		
Body-worn/Hotspot	LTE Band 14	10	QPSK	1	2040M	1:1	-0.01	793.00	23330	0.0	24.0	23.30	25	0	Back	5	0.831	1.175	0.976	0.976	0.610		23.1		
Body-worn/Hotspot	LTE Band 14	10	QPSK	1	2040M	1:1	-0.05	793.00	23330	0.0	24.0	23.23	50	0	Back	5	0.836	1.194	0.998	0.998	0.624	Plot	23.0		
Body-worn/Hotspot	LTE Band 14	10	QPSK	1	2040M	1:1	-0.01	793.00	23330	0.0	24.0	23.23	50	0	Back	5	0.859	1.194	0.961	0.961	0.601		23.2		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.01	793.00	23330	0.0	24.0	23.25	1	0	Front	5	0.291	1.189	0.346	0.346	0.216		27.6		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.01	793.00	23330	0.0	24.0	23.30	25	0	Front	5	0.232	1.175	0.273	0.273	0.171		28.6		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	0.01	793.00	23330	0.0	24.0	23.25	1	0	Bottom	10	0.229	1.189	0.272	0.272	0.170		28.6	23.0	23.0
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	0.02	793.00	23330	0.0	24.0	23.30	25	0	Bottom	10	0.185	1.175	0.217	0.217	0.136		29.6		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.05	793.00	23330	0.0	24.0	23.25	1	0	Right	10	0.190	1.189	0.226	0.226	0.141		29.4		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.01	793.00	23330	0.0	24.0	23.30	25	0	Right	10	0.148	1.175	0.174	0.174	0.109		30.6		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.13	793.00	23330	0.0	24.0	23.25	1	0	Left	10	0.081	1.189	0.096	0.096	0.060		33.1		
Hotspot	LTE Band 14	10	QPSK	1	3744M	1:1	-0.18	793.00	23330	0.0	24.0	23.30	25	0	Left	10	0.060	1.175	0.071	0.071	0.044		34.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Blue entry represents variability measurement

12.10 LTE Band 26 (Cell) Standalone SAR

Table 12-19 Plot A19

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.03	831.50	26865	0.0	25.0	24.35	1	36	Right Cheek	0	0.268	1.161	0.311	0.341	0.213	Plot	29.0		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.03	831.50	26865	1.0	24.0	23.47	36	37	Right Cheek	0	0.212	1.130	0.240	0.331	0.207		29.2		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	0.05	831.50	26865	0.0	25.0	24.35	1	36	Right Tilt	0	0.139	1.161	0.161	0.177	0.111		31.9		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.01	831.50	26865	1.0	24.0	23.47	36	37	Right Tilt	0	0.114	1.130	0.129	0.178	0.111		31.9		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	0.06	831.50	26865	0.0	25.0	24.35	1	36	Left Cheek	0	0.210	1.161	0.244	0.268	0.168		30.1	29.0	25.4
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.05	831.50	26865	1.0	24.0	23.47	36	37	Left Cheek	0	0.182	1.130	0.206	0.284	0.178		29.9		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.01	831.50	26865	0.0	25.0	24.35	1	36	Left Tilt	0	0.113	1.161	0.131	0.144	0.090		32.8		
Head	LTE Band 26	15	QPSK	1	3762M	1:1	-0.08	831.50	26865	1.0	24.0	23.47	36	37	Left Tilt	0	0.085	1.130	0.096	0.133	0.083		33.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-20 Plot A20

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 26	15	QPSK	1	1964M	1:1	-0.01	831.50	26865	0.0	24.0	23.10	1	36	Back	5	0.758	1.230	0.932	0.932	0.583		23.3		
Body-worn/Hotspot	LTE Band 26	15	QPSK	1	1964M	1:1	0.01	831.50	26865	0.0	24.0	23.20	36	37	Back	5	0.795	1.202	0.956	0.956	0.598	Plot	23.2		
Body-worn/Hotspot	LTE Band 26	15	QPSK	1	1964M	1:1	0.01	831.50	26865	0.0	24.0	23.04	75	0	Back	5	0.766	1.247	0.955	0.955	0.597		23.2		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.02	831.50	26865	0.0	24.0	23.10	1	36	Front	5	0.334	1.230	0.411	0.411	0.257		26.8		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.01	831.50	26865	0.0	24.0	23.20	36	37	Front	5	0.299	1.202	0.359	0.359	0.224		27.4		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.01	831.50	26865	0.0	24.0	23.10	1	36	Bottom	10	0.351	1.230	0.432	0.432	0.270		26.6	23.2	23.0
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	0.02	831.50	26865	0.0	24.0	23.20	36	37	Bottom	10	0.276	1.202	0.332	0.332	0.208		27.8		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	0.01	831.50	26865	0.0	24.0	23.10	1	36	Right	10	0.199	1.230	0.245	0.245	0.153		29.1		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.01	831.50	26865	0.0	24.0	23.20	36	37	Right	10	0.159	1.202	0.191	0.191	0.119		30.2		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.04	831.50	26865	0.0	24.0	23.10	1	36	Left	10	0.092	1.230	0.113	0.113	0.071		32.4		
Hotspot	LTE Band 26	15	QPSK	1	3744M	1:1	-0.08	831.50	26865	0.0	24.0	23.20	36	37	Left	10	0.074	1.202	0.089	0.089	0.056		33.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.1 LTE Band 5 (Cell) Standalone SAR

Table 12-21 Plot A20

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 5	10	QPSK	1	3762M	1:1	-0.02	836.50	20525	0.0	25.0	24.58	1	0	Right Cheek	0	0.313	1.102	0.345	0.434	0.271	Plot	28.6	28.6	26.0
Head	LTE Band 5	10	QPSK	1	3762M	1:1	0.03	836.50	20525	1.0	24.0	23.55	25	25	Right Cheek	0	0.235	1.109	0.261	0.413	0.258		28.8		
Head	LTE Band 5	10	QPSK	1	3762M	1:1	-0.04	836.50	20525	0.0	25.0	24.58	1	0	Right Tilt	0	0.164	1.102	0.181	0.227	0.142		31.4		
Head	LTE Band 5	10	QPSK	1	3762M	1:1	-0.08	836.50	20525	1.0	24.0	23.55	25	25	Right Tilt	0	0.123	1.109	0.136	0.216	0.135		31.6		
Head	LTE Band 5	10	QPSK	1	3762M	1:1	0.02	836.50	20525	0.0	25.0	24.58	1	0	Left Cheek	0	0.249	1.102	0.274	0.345	0.216		29.6		
Head	LTE Band 5	10	QPSK	1	3762M	1:1	-0.01	836.50	20525	1.0	24.0	23.55	25	25	Left Cheek	0	0.199	1.109	0.221	0.350	0.219		29.5		
Head	LTE Band 5	10	QPSK	1	1964M	1:1	-0.17	836.50	20525	0.0	25.0	24.58	1	0	Left Tilt	0	0.126	1.102	0.139	0.175	0.109		32.6		
Head	LTE Band 5	10	QPSK	1	1964M	1:1	-0.04	836.50	20525	1.0	24.0	23.55	25	25	Left Tilt	0	0.096	1.109	0.106	0.169	0.106		32.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-22 Plot A20

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 5	10	QPSK	1	1964M	1:1	-0.01	836.50	20525	0.0	24.0	23.17	1	0	Back	5	0.734	1.211	0.889	0.889	0.556		23.5		
Body-worn/Hotspot	LTE Band 5	10	QPSK	1	1964M	1:1	0.00	836.50	20525	0.0	24.0	23.11	25	25	Back	5	0.767	1.227	0.941	0.941	0.588	Plot	23.2		
Body-worn/Hotspot	LTE Band 5	10	QPSK	1	1964M	1:1	0.00	836.50	20525	0.0	24.0	23.05	50	0	Back	5	0.767	1.245	0.955	0.955	0.597		23.2		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	0.00	836.50	20525	0.0	24.0	23.17	1	0	Front	5	0.441	1.211	0.534	0.534	0.334		25.7		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	-0.02	836.50	20525	0.0	24.0	23.11	25	25	Front	5	0.376	1.227	0.461	0.461	0.288		26.3		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	0.00	836.50	20525	0.0	24.0	23.17	1	0	Bottom	10	0.365	1.211	0.442	0.442	0.276		26.5	23.2	23.0
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	0.03	836.50	20525	0.0	24.0	23.11	25	25	Bottom	10	0.290	1.227	0.356	0.356	0.223		27.5		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	-0.02	836.50	20525	0.0	24.0	23.17	1	0	Right	10	0.255	1.211	0.309	0.309	0.193		28.1		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	-0.06	836.50	20525	0.0	24.0	23.11	25	25	Right	10	0.196	1.227	0.240	0.240	0.150		29.2		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	-0.06	836.50	20525	0.0	24.0	23.17	1	0	Left	10	0.112	1.211	0.136	0.136	0.085		31.7		
Hotspot	LTE Band 5	10	QPSK	1	3744M	1:1	-0.13	836.50	20525	0.0	24.0	23.11	25	25	Left	10	0.089	1.227	0.109	0.109	0.068		32.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.2 LTE Band 66 (AWS) Standalone SAR

Table 12-23

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 66	20	QPSK	2	4413M	1:1	-0.10	1720.00	132072	0.0	24.5	22.91	1	99	Right Cheek	0	0.102	1.442	0.147	0.147	0.092		31.8		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.03	1720.00	132072	1.0	23.5	21.92	50	25	Right Cheek	0	0.098	1.439	0.141	0.141	0.088		31.0		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.02	1720.00	132072	0.0	24.5	22.91	1	99	Right Tilt	0	0.051	1.442	0.074	0.074	0.046		34.8		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.05	1720.00	132072	1.0	23.5	21.92	50	25	Right Tilt	0	0.050	1.439	0.072	0.072	0.045		33.9	30.2	23.5
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.00	1720.00	132072	0.0	24.5	22.91	1	99	Left Cheek	0	0.120	1.442	0.173	0.173	0.108		31.1		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.00	1720.00	132072	1.0	23.5	21.92	50	25	Left Cheek	0	0.118	1.439	0.170	0.170	0.106		30.2		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	-0.05	1720.00	132072	0.0	24.5	22.91	1	99	Left Tilt	0	0.087	1.442	0.125	0.125	0.078		32.5		
Head	LTE Band 66	20	QPSK	2	4413M	1:1	0.17	1720.00	132072	1.0	23.5	21.92	50	25	Left Tilt	0	0.086	1.439	0.124	0.124	0.078		31.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-24 Plot A23

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 66	20	QPSK	4	3034M	1:1	0.02	1720.00	132072	0.0	21.5	20.62	1	0	Right Cheek	0	0.181	1.225	0.222	0.222	0.139		27.0		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	-0.05	1720.00	132072	0.0	21.5	20.75	50	0	Right Cheek	0	0.189	1.189	0.225	0.225	0.141		27.0		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	0.00	1720.00	132072	0.0	21.5	20.62	1	0	Right Tilt	0	0.210	1.225	0.257	0.257	0.161		26.4		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	-0.02	1720.00	132072	0.0	21.5	20.75	50	0	Right Tilt	0	0.209	1.189	0.249	0.249	0.156		26.5		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	-0.06	1720.00	132072	0.0	21.5	20.62	1	0	Left Cheek	0	0.514	1.225	0.630	0.630	0.394		22.5	22.5	20.5
Head	LTE Band 66	20	QPSK	4	3034M	1:1	-0.02	1720.00	132072	0.0	21.5	20.75	50	0	Left Cheek	0	0.533	1.189	0.634	0.634	0.396	Plot	22.5		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	0.01	1720.00	132072	0.0	21.5	20.62	1	0	Left Tilt	0	0.448	1.225	0.549	0.549	0.343		23.1		
Head	LTE Band 66	20	QPSK	4	3034M	1:1	-0.01	1720.00	132072	0.0	21.5	20.75	50	0	Left Tilt	0	0.448	1.189	0.533	0.533	0.333		23.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-25

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	-0.03	1720.00	132072	0.0	20.0	18.49	1	99	Back	5	0.545	1.416	0.772	0.772	0.483		20.1		
Body-worn/Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	0.00	1745.00	132322	0.0	20.0	18.60	1	99	Back	5	0.582	1.380	0.803	0.803	0.502		19.9		
Body-worn/Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	0.01	1770.00	132572	0.0	20.0	18.54	1	50	Back	5	0.577	1.400	0.808	0.808	0.505		19.9		
Body-worn/Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	-0.01	1745.00	132322	0.0	20.0	18.66	50	50	Back	5	0.559	1.361	0.761	0.761	0.476		20.2		
Body-worn/Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	-0.02	1745.00	132322	0.0	20.0	18.58	100	0	Back	5	0.537	1.387	0.745	0.745	0.466		20.3		
Hotspot	LTE Band 66	20	QPSK	2	1967M	1:1	0.01	1745.00	132322	0.0	20.0	18.60	1	99	Front	5	0.325	1.380	0.449	0.449	0.281		22.5	19.9	19.0
Hotspot	LTE Band 66	20	QPSK	2	1967M	1:1	-0.02	1745.00	132322	0.0	20.0	18.66	50	50	Front	5	0.329	1.361	0.448	0.448	0.280		22.5		
Hotspot	LTE Band 66	20	QPSK	2	1967M	1:1	0.08	1745.00	132322	0.0	20.0	18.60	1	99	Bottom	10	0.223	1.380	0.308	0.308	0.193		24.1		
Hotspot	LTE Band 66	20	QPSK	2	1967M	1:1	0.03	1745.00	132322	0.0	20.0	18.66	50	50	Bottom	10	0.221	1.361	0.301	0.301	0.188		24.2		
Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	-0.04	1745.00	132322	0.0	20.0	18.60	1	99	Left	10	0.118	1.380	0.163	0.163	0.102		26.9		
Hotspot	LTE Band 66	20	QPSK	2	4413M	1:1	0.01	1745.00	132322	0.0	20.0	18.66	50	50	Left	10	0.115	1.361	0.157	0.157	0.098		27.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-26 Plot A24

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	-0.01	1720.00	132072	0.0	22.0	21.66	1	0	Back	5	0.643	1.081	0.695	0.695	0.434	Plot	22.6	22.6	21.0
Body-worn/Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	0.00	1720.00	132072	0.0	22.0	21.48	50	0	Back	5	0.615	1.127	0.693	0.693	0.433		22.6		
Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	-0.04	1720.00	132072	0.0	22.0	21.66	1	0	Front	5	0.476	1.081	0.515	0.515	0.322		23.9		
Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	-0.01	1720.00	132072	0.0	22.0	21.48	50	0	Front	5	0.458	1.127	0.516	0.516	0.323		23.9		
Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	-0.06	1720.00	132072	0.0	22.0	21.66	1	0	Top	10	0.193	1.081	0.209	0.209	0.131		27.8		
Hotspot	LTE Band 66	20	QPSK	4	4413M	1:1	0.02	1720.00	132072	0.0	22.0	21.48	50	0	Top	10	0.179	1.127	0.202	0.202	0.126		27.9		
Hotspot	LTE Band 66	20	QPSK	4	1967M	1:1	-0.04	1720.00	132072	0.0	22.0	21.66	1	0	Right	10	0.088	1.081	0.095	0.095	0.059		31.2		
Hotspot	LTE Band 66	20	QPSK	4	1967M	1:1	-0.11	1720.00	132072	0.0	22.0	21.48	50	0	Right	10	0.096	1.127	0.108	0.108	0.068		30.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.3 LTE Band 25 (PCS) Standalone SAR

Table 12-27

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.10	1905.00	26590	0.0	24.5	22.73	1	50	Right Cheek	0	0.213	1.503	0.320	0.320	0.200		28.4	27.1	23.5
Head	LTE Band 25	20	QPSK	2	4413M	1:1	0.05	1905.00	26590	1.0	23.5	21.72	50	0	Right Cheek	0	0.164	1.507	0.247	0.247	0.154		28.6		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.04	1905.00	26590	0.0	24.5	22.73	1	50	Right Tilt	0	0.087	1.503	0.131	0.131	0.082		32.3		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	0.03	1905.00	26590	1.0	23.5	21.72	50	0	Right Tilt	0	0.069	1.507	0.104	0.104	0.065		32.3		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.07	1905.00	26590	0.0	24.5	22.73	1	50	Left Cheek	0	0.290	1.503	0.436	0.436	0.273		27.1		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.03	1905.00	26590	1.0	23.5	21.72	50	0	Left Cheek	0	0.210	1.507	0.316	0.316	0.198		27.5		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.18	1905.00	26590	0.0	24.5	22.73	1	50	Left Tilt	0	0.155	1.503	0.233	0.233	0.146		29.8		
Head	LTE Band 25	20	QPSK	2	4413M	1:1	-0.03	1905.00	26590	1.0	23.5	21.72	50	0	Left Tilt	0	0.128	1.507	0.193	0.193	0.121		29.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-28 Plot A25

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 25	20	QPSK	4	1967M	1:1	-0.06	1860.00	26140	0.0	19.0	17.53	1	50	Right Cheek	0	0.186	1.403	0.261	0.261	0.163		23.8	20.6	18.0
Head	LTE Band 25	20	QPSK	4	1967M	1:1	0.02	1860.00	26140	0.0	19.0	17.64	50	0	Right Cheek	0	0.190	1.368	0.260	0.260	0.163		23.8		
Head	LTE Band 25	20	QPSK	4	1967M	1:1	-0.05	1860.00	26140	0.0	19.0	17.53	1	50	Right Tilt	0	0.165	1.403	0.231	0.231	0.144		24.3		
Head	LTE Band 25	20	QPSK	4	1967M	1:1	0.13	1860.00	26140	0.0	19.0	17.64	50	0	Right Tilt	0	0.164	1.368	0.224	0.224	0.140		24.5		
Head	LTE Band 25	20	QPSK	4	1967M	1:1	-0.01	1860.00	26140	0.0	19.0	17.53	1	50	Left Cheek	0	0.392	1.403	0.550	0.550	0.344		20.6		
Head	LTE Band 25	20	QPSK	4	1967M	1:1	0.01	1860.00	26140	0.0	19.0	17.64	50	0	Left Cheek	0	0.393	1.368	0.538	0.538	0.336	Plot	20.7		
Head	LTE Band 25	20	QPSK	4	4413M	1:1	0.01	1860.00	26140	0.0	19.0	17.53	1	50	Left Tilt	0	0.206	1.403	0.289	0.289	0.181		23.4		
Head	LTE Band 25	20	QPSK	4	4413M	1:1	-0.01	1860.00	26140	0.0	19.0	17.64	50	0	Left Tilt	0	0.208	1.368	0.285	0.285	0.178		23.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-29

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 25	20	QPSK	2	4413M	1:1	-0.03	1905.00	26590	0.0	20.0	18.48	1	99	Back	5	0.552	1.419	0.783	0.783	0.489		20.0	20.0	19.0
Body-worn/Hotspot	LTE Band 25	20	QPSK	2	4413M	1:1	-0.01	1905.00	26590	0.0	20.0	18.53	50	50	Back	5	0.562	1.403	0.788	0.788	0.493	Plot	20.0		
Hotspot	LTE Band 25	20	QPSK	2	1967M	1:1	0.02	1905.00	26590	0.0	20.0	18.48	1	99	Front	5	0.376	1.419	0.534	0.534	0.334		21.7		
Hotspot	LTE Band 25	20	QPSK	2	1967M	1:1	-0.01	1905.00	26590	0.0	20.0	18.53	50	50	Front	5	0.380	1.403	0.533	0.533	0.333		21.7		
Hotspot	LTE Band 25	20	QPSK	2	1967M	1:1	-0.13	1905.00	26590	0.0	20.0	18.48	1	99	Bottom	10	0.301	1.419	0.427	0.427	0.267		22.7		
Hotspot	LTE Band 25	20	QPSK	2	1967M	1:1	-0.02	1905.00	26590	0.0	20.0	18.53	50	50	Bottom	10	0.299	1.403	0.419	0.419	0.262		22.8		
Hotspot	LTE Band 25	20	QPSK	2	4413M	1:1	-0.09	1905.00	26590	0.0	20.0	18.48	1	99	Left	10	0.125	1.419	0.177	0.177	0.111		26.5		
Hotspot	LTE Band 25	20	QPSK	2	4413M	1:1	0.01	1905.00	26590	0.0	20.0	18.53	50	50	Left	10	0.129	1.403	0.181	0.181	0.113		26.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-30

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	-0.02	1905.00	26590	0.0	21.0	19.69	1	50	Back	5	0.501	1.352	0.677	0.677	0.423		21.7	21.5	20.0
Body-worn/Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	0.00	1905.00	26590	0.0	21.0	19.67	50	25	Back	5	0.515	1.358	0.699	0.699	0.437		21.5		
Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	0.02	1905.00	26590	0.0	21.0	19.69	1	50	Front	5	0.473	1.352	0.639	0.639	0.399		21.9		
Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	-0.01	1905.00	26590	0.0	21.0	19.67	50	25	Front	5	0.470	1.358	0.638	0.638	0.399		21.9		
Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	-0.18	1905.00	26590	0.0	21.0	19.69	1	50	Top	10	0.177	1.352	0.239	0.239	0.149		26.2		
Hotspot	LTE Band 25	20	QPSK	4	4413M	1:1	0.16	1905.00	26590	0.0	21.0	19.67	50	25	Top	10	0.177	1.358	0.240	0.240	0.150		26.2		
Hotspot	LTE Band 25	20	QPSK	4	1967M	1:1	-0.14	1905.00	26590	0.0	21.0	19.69	1	50	Right	10	0.137	1.352	0.185	0.185	0.116		27.3		
Hotspot	LTE Band 25	20	QPSK	4	1967M	1:1	-0.08	1905.00	26590	0.0	21.0	19.67	50	25	Right	10	0.143	1.358	0.194	0.194	0.121		27.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.4 LTE Band 30 Standalone SAR

Table 12-31

posure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 30	10	QPSK	2	2085M	1:1	-0.17	2310.00	27710	0.0	24.0	22.60	1	25	Right Cheek	0	0.151	1.380	0.208	0.245	0.153		29.8	28.7	24.7
Head	LTE Band 30	10	QPSK	2	2085M	1:1	0.14	2310.00	27710	1.0	23.0	21.61	25	0	Right Cheek	0	0.095	1.377	0.131	0.194	0.121		30.8		
Head	LTE Band 30	10	QPSK	2	2085M	1:1	0.10	2310.00	27710	0.0	24.0	22.60	1	25	Right Tilt	0	0.092	1.380	0.127	0.149	0.093		31.9		
Head	LTE Band 30	10	QPSK	2	2085M	1:1	0.03	2310.00	27710	1.0	23.0	21.61	25	0	Right Tilt	0	0.053	1.377	0.073	0.108	0.068		33.3		
Head	LTE Band 30	10	QPSK	2	3709M	1:1	0.20	2310.00	27710	0.0	24.0	22.60	1	25	Left Cheek	0	0.194	1.380	0.268	0.315	0.197		28.7		
Head	LTE Band 30	10	QPSK	2	3709M	1:1	-0.11	2310.00	27710	1.0	23.0	21.61	25	0	Left Cheek	0	0.130	1.377	0.179	0.265	0.166		29.5		
Head	LTE Band 30	10	QPSK	2	3709M	1:1	-0.11	2310.00	27710	0.0	24.0	22.60	1	25	Left Tilt	0	0.044	1.380	0.061	0.071	0.044		35.1		
Head	LTE Band 30	10	QPSK	2	3709M	1:1	0.04	2310.00	27710	1.0	23.0	21.61	25	0	Left Tilt	0	0.032	1.377	0.044	0.065	0.041		35.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-32 Plot A27

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 30	10	QPSK	4	3027M	1:1	0.04	2310.00	27710	0.0	15.5	14.13	1	0	Right Cheek	0	0.187	1.371	0.256	0.256	0.160		20.4	16.9	14.5
Head	LTE Band 30	10	QPSK	4	3027M	1:1	-0.03	2310.00	27710	0.0	15.5	14.05	25	0	Right Cheek	0	0.184	1.396	0.257	0.257	0.161		20.4		
Head	LTE Band 30	10	QPSK	4	2085M	1:1	0.00	2310.00	27710	0.0	15.5	14.13	1	0	Right Tilt	0	0.180	1.371	0.247	0.247	0.154		20.6		
Head	LTE Band 30	10	QPSK	4	2085M	1:1	0.06	2310.00	27710	0.0	15.5	14.05	25	0	Right Tilt	0	0.178	1.396	0.248	0.248	0.155		20.5		
Head	LTE Band 30	10	QPSK	4	3027M	1:1	-0.01	2310.00	27710	0.0	15.5	14.13	1	0	Left Cheek	0	0.413	1.371	0.566	0.566	0.354	Plot	17.0		
Head	LTE Band 30	10	QPSK	4	3027M	1:1	0.00	2310.00	27710	0.0	15.5	14.05	25	0	Left Cheek	0	0.408	1.396	0.570	0.570	0.356		16.9		
Head	LTE Band 30	10	QPSK	4	3027M	1:1	0.02	2310.00	27710	0.0	15.5	14.13	1	0	Left Tilt	0	0.217	1.371	0.298	0.298	0.186		19.7		
Head	LTE Band 30	10	QPSK	4	3027M	1:1	0.04	2310.00	27710	0.0	15.5	14.05	25	0	Left Tilt	0	0.218	1.396	0.304	0.304	0.190		19.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-33 Plot A28/A29

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 30	10	QPSK	2	4493M	1:1	-0.08	2310.00	27710	0.0	21.5	20.04	1	25	Back	5	0.474	1.400	0.664	0.664	0.415	Plot	22.3	21.3	20.5
Body-worn/Hotspot	LTE Band 30	10	QPSK	2	4493M	1:1	-0.05	2310.00	27710	0.0	21.5	19.99	25	12	Back	5	0.450	1.416	0.637	0.637	0.398		22.4		
Hotspot	LTE Band 30	10	QPSK	2	4493M	1:1	0.02	2310.00	27710	0.0	21.5	20.04	1	25	Front	5	0.585	1.400	0.819	0.819	0.512	Plot	21.3		
Hotspot	LTE Band 30	10	QPSK	2	4493M	1:1	-0.02	2310.00	27710	0.0	21.5	19.99	25	12	Front	5	0.576	1.416	0.816	0.816	0.510		21.4		
Hotspot	LTE Band 30	10	QPSK	2	4493M	1:1	0.00	2310.00	27710	0.0	21.5	19.97	50	0	Front	5	0.561	1.422	0.798	0.798	0.499		21.5		
Hotspot	LTE Band 30	10	QPSK	2	3709M	1:1	-0.03	2310.00	27710	0.0	21.5	20.04	1	25	Bottom	10	0.291	1.400	0.407	0.407	0.254		24.4		
Hotspot	LTE Band 30	10	QPSK	2	3709M	1:1	-0.02	2310.00	27710	0.0	21.5	19.99	25	12	Bottom	10	0.295	1.416	0.418	0.418	0.261		24.3		
Hotspot	LTE Band 30	10	QPSK	2	2085M	1:1	-0.03	2310.00	27710	0.0	21.5	20.04	1	25	Left	10	0.132	1.400	0.185	0.185	0.116		27.8		
Hotspot	LTE Band 30	10	QPSK	2	2085M	1:1	-0.13	2310.00	27710	0.0	21.5	19.99	25	12	Left	10	0.121	1.416	0.171	0.171	0.107		28.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-34

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 30	10	QPSK	4	4506M	1:1	-0.02	2310.00	27710	0.0	20.0	18.55	1	0	Back	5	0.441	1.396	0.616	0.616	0.385		21.1	20.6	19.0
Body-worn/Hotspot	LTE Band 30	10	QPSK	4	4506M	1:1	0.01	2310.00	27710	0.0	20.0	18.55	25	0	Back	5	0.432	1.396	0.603	0.603	0.377		21.2		
Hotspot	LTE Band 30	10	QPSK	4	4506M	1:1	0.00	2310.00	27710	0.0	20.0	18.55	1	0	Front	5	0.497	1.396	0.694	0.694	0.434		20.6		
Hotspot	LTE Band 30	10	QPSK	4	4506M	1:1	-0.02	2310.00	27710	0.0	20.0	18.55	25	0	Front	5	0.493	1.396	0.688	0.688	0.430		20.6		
Hotspot	LTE Band 30	10	QPSK	4	2085M	1:1	-0.14	2310.00	27710	0.0	20.0	18.55	1	0	Top	10	0.202	1.396	0.282	0.282	0.176		24.5		
Hotspot	LTE Band 30	10	QPSK	4	2085M	1:1	0.00	2310.00	27710	0.0	20.0	18.55	25	0	Top	10	0.198	1.396	0.276	0.276	0.173		24.6		
Hotspot	LTE Band 30	10	QPSK	4	2085M	1:1	-0.06	2310.00	27710	0.0	20.0	18.55	1	0	Right	10	0.269	1.396	0.376	0.376	0.235		23.2		
Hotspot	LTE Band 30	10	QPSK	4	2085M	1:1	-0.05	2310.00	27710	0.0	20.0	18.55	25	0	Right	10	0.265	1.396	0.370	0.370	0.231		23.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram									

12.5 LTE Band 7 Standalone SAR

Table 12-35

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 7	20	QPSK	2	2085M	1:1	0.09	2510.00	20850	0.0	24.5	23.34	1	50	Right Cheek	0	0.191	1.306	0.249	0.249	0.156		29.5	28.6	24.4
Head	LTE Band 7	20	QPSK	2	2085M	1:1	-0.02	2510.00	20850	1.0	23.5	22.19	50	25	Right Cheek	0	0.152	1.352	0.206	0.253	0.158		29.4		
Head	LTE Band 7	20	QPSK	2	2085M	1:1	0.02	2510.00	20850	0.0	24.5	23.34	1	50	Right Tilt	0	0.132	1.306	0.172	0.172	0.108		31.1		
Head	LTE Band 7	20	QPSK	2	2085M	1:1	0.15	2510.00	20850	1.0	23.5	22.19	50	25	Right Tilt	0	0.113	1.352	0.153	0.188	0.118		30.6		
Head	LTE Band 7	20	QPSK	2	3709M	1:1	0.10	2510.00	20850	0.0	24.5	23.34	1	50	Left Cheek	0	0.212	1.306	0.277	0.277	0.173		29.1		
Head	LTE Band 7	20	QPSK	2	3709M	1:1	0.10	2510.00	20850	1.0	23.5	22.19	50	25	Left Cheek	0	0.179	1.352	0.242	0.298	0.186		28.6		
Head	LTE Band 7	20	QPSK	2	3708M	1:1	-0.20	2510.00	20850	0.0	24.5	23.34	1	50	Left Tilt	0	0.095	1.306	0.124	0.124	0.078		32.5		
Head	LTE Band 7	20	QPSK	2	3709M	1:1	-0.20	2510.00	20850	1.0	23.5	22.19	50	25	Left Tilt	0	0.069	1.352	0.093	0.115	0.072		32.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-36 Plot A30

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 7	20	QPSK	4	3027M	1:1	0.01	2560.00	21350	0.0	18.0	16.65	1	50	Right Cheek	0	0.127	1.365	0.173	0.173	0.108		24.6	19.6	17.0
Head	LTE Band 7	20	QPSK	4	3027M	1:1	-0.03	2560.00	21350	0.0	18.0	16.69	50	25	Right Cheek	0	0.129	1.352	0.174	0.174	0.109		24.6		
Head	LTE Band 7	20	QPSK	4	3719M	1:1	0.06	2560.00	21350	0.0	18.0	16.65	1	50	Right Tilt	0	0.166	1.365	0.227	0.227	0.142		23.4		
Head	LTE Band 7	20	QPSK	4	3719M	1:1	0.13	2560.00	21350	0.0	18.0	16.69	50	25	Right Tilt	0	0.175	1.352	0.237	0.237	0.148		23.2		
Head	LTE Band 7	20	QPSK	4	3027M	1:1	0.01	2560.00	21350	0.0	18.0	16.65	1	50	Left Cheek	0	0.401	1.365	0.547	0.547	0.342		19.6		
Head	LTE Band 7	20	QPSK	4	3027M	1:1	0.04	2560.00	21350	0.0	18.0	16.69	50	25	Left Cheek	0	0.402	1.352	0.544	0.544	0.340	Plot	19.6		
Head	LTE Band 7	20	QPSK	4	3027M	1:1	0.01	2560.00	21350	0.0	18.0	16.65	1	50	Left Tilt	0	0.295	1.365	0.403	0.403	0.252		20.9		
Head	LTE Band 7	20	QPSK	4	3027M	1:1	-0.01	2560.00	21350	0.0	18.0	16.69	50	25	Left Tilt	0	0.301	1.352	0.407	0.407	0.254		20.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-37 Plot A31

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.00	2510.00	20850	0.0	21.5	20.30	1	50	Back	5	0.628	1.318	0.828	0.828	0.518		21.3	21.3	20.5
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.01	2535.00	21100	0.0	21.5	20.26	1	0	Back	5	0.604	1.330	0.803	0.803	0.502		21.4		
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.02	2560.00	21350	0.0	21.5	20.10	1	50	Back	5	0.579	1.380	0.799	0.799	0.499		21.5		
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	-0.02	2510.00	20850	0.0	21.5	20.36	50	0	Back	5	0.623	1.300	0.810	0.810	0.506		21.4		
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.01	2535.00	21100	0.0	21.5	20.32	50	0	Back	5	0.612	1.312	0.803	0.803	0.502		21.4		
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.02	2560.00	21350	0.0	21.5	20.24	50	0	Back	5	0.606	1.337	0.810	0.810	0.506		21.4		
Body-worn/Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	-0.02	2510.00	20850	0.0	21.5	20.29	100	0	Back	5	0.630	1.321	0.832	0.832	0.520	Plot	21.3		
Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.02	2510.00	20850	0.0	21.5	20.30	1	50	Front	5	0.581	1.318	0.766	0.766	0.479		21.6		
Hotspot	LTE Band 7	20	QPSK	2	3027M	1:1	0.01	2510.00	20850	0.0	21.5	20.36	50	0	Front	5	0.573	1.300	0.745	0.745	0.466		21.8		
Hotspot	LTE Band 7	20	QPSK	2	3709M	1:1	-0.02	2510.00	20850	0.0	21.5	20.30	1	50	Bottom	10	0.290	1.318	0.382	0.382	0.239		24.7		
Hotspot	LTE Band 7	20	QPSK	2	3709M	1:1	0.05	2510.00	20850	0.0	21.5	20.36	50	0	Bottom	10	0.300	1.300	0.390	0.390	0.244		24.6		
Hotspot	LTE Band 7	20	QPSK	2	2085M	1:1	-0.11	2510.00	20850	0.0	21.5	20.30	1	50	Left	10	0.122	1.318	0.161	0.161	0.101		28.4		
Hotspot	LTE Band 7	20	QPSK	2	2085M	1:1	-0.08	2510.00	20850	0.0	21.5	20.36	50	0	Left	10	0.118	1.300	0.153	0.153	0.096		28.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-38

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 7	20	QPSK	4	4493M	1:1	-0.05	2560.00	21350	0.0	20.5	19.37	1	99	Back	5	0.535	1.297	0.694	0.694	0.434		21.1	21.1	19.5
Body-worn/Hotspot	LTE Band 7	20	QPSK	4	4493M	1:1	0.02	2560.00	21350	0.0	20.5	19.31	50	25	Back	5	0.528	1.315	0.694	0.694	0.434		21.1		
Hotspot	LTE Band 7	20	QPSK	4	4493M	1:1	-0.05	2560.00	21350	0.0	20.5	19.37	1	99	Front	5	0.369	1.297	0.479	0.479	0.299		22.7		
Hotspot	LTE Band 7	20	QPSK	4	4493M	1:1	-0.08	2560.00	21350	0.0	20.5	19.31	50	25	Front	5	0.366	1.315	0.481	0.481	0.301		22.7		
Hotspot	LTE Band 7	20	QPSK	4	2085M	1:1	-0.08	2560.00	21350	0.0	20.5	19.37	1	99	Top	10	0.248	1.297	0.322	0.322	0.201		24.4		
Hotspot	LTE Band 7	20	QPSK	4	2085M	1:1	0.04	2560.00	21350	0.0	20.5	19.31	50	25	Top	10	0.269	1.315	0.354	0.354	0.221		24.0		
Hotspot	LTE Band 7	20	QPSK	4	2085M	1:1	0.10	2560.00	21350	0.0	20.5	19.37	1	99	Right	10	0.197	1.297	0.256	0.256	0.160		25.4		
Hotspot	LTE Band 7	20	QPSK	4	2085M	1:1	-0.10	2560.00	21350	0.0	20.5	19.31	50	25	Right	10	0.195	1.315	0.256	0.256	0.160		25.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.6 LTE Band 41 Standalone SAR

Table 12-39

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.01	2680.00	41490	0.0	20.0	18.89	1	99	Right Cheek	0	0.051	1.291	0.066	0.066	0.041		28.8	28.8	17.0
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.01	2680.00	41490	0.0	20.0	18.97	50	50	Right Cheek	0	0.050	1.268	0.063	0.063	0.039		29.0		
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.05	2680.00	41490	0.0	20.0	18.89	1	99	Right Tilt	0	0.031	1.291	0.040	0.040	0.025		31.0		
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.06	2680.00	41490	0.0	20.0	18.97	50	50	Right Tilt	0	0.041	1.268	0.052	0.052	0.033		29.8		
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.06	2680.00	41490	0.0	20.0	18.89	1	99	Left Cheek	0	0.048	1.291	0.062	0.062	0.039		29.1		
Head	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.13	2680.00	41490	0.0	20.0	18.97	50	50	Left Cheek	0	0.051	1.268	0.065	0.065	0.041		28.9		
Head	LTE Band 41	20	QPSK	2	0719M	1:1.58	0.03	2680.00	41490	0.0	20.0	18.89	1	99	Left Tilt	0	0.014	1.291	0.018	0.018	0.011		34.4		
Head	LTE Band 41	20	QPSK	2	0719M	1:1.58	0.07	2680.00	41490	0.0	20.0	18.97	50	50	Left Tilt	0	0.009	1.268	0.011	0.011	0.007		36.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-40 Plot A32

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.09	2593.00	40620	0.0	18.0	16.73	1	0	Right Cheek	0	0.140	1.340	0.188	0.188	0.118		22.3	17.5	15.0
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.02	2593.00	40620	0.0	18.0	16.83	50	50	Right Cheek	0	0.126	1.309	0.165	0.165	0.103		22.8		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	-0.02	2593.00	40620	0.0	18.0	16.73	1	0	Right Tilt	0	0.125	1.340	0.168	0.168	0.105		22.8		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.04	2593.00	40620	0.0	18.0	16.83	50	50	Right Tilt	0	0.126	1.309	0.165	0.165	0.103		22.8		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.13	2593.00	40620	0.0	18.0	16.73	1	0	Left Cheek	0	0.417	1.340	0.559	0.559	0.349	Plot	17.5		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	-0.03	2593.00	40620	0.0	18.0	16.83	50	50	Left Cheek	0	0.408	1.309	0.534	0.534	0.334		17.7		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	-0.07	2593.00	40620	0.0	18.0	16.73	1	0	Left Tilt	0	0.334	1.340	0.448	0.448	0.280		18.5		
Head	LTE Band 41	20	QPSK	4	3719M	1:1.58	-0.06	2593.00	40620	0.0	18.0	16.83	50	50	Left Tilt	0	0.310	1.309	0.406	0.406	0.254		18.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-41

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.03	2680.00	41490	0.0	20.0	18.89	1	99	Back	5	0.285	1.291	0.368	0.368	0.230		21.3	20.0	17.0
Body-worn/Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.04	2680.00	41490	0.0	20.0	18.97	50	50	Back	5	0.287	1.268	0.364	0.364	0.228		21.4		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.03	2680.00	41490	0.0	20.0	18.89	1	99	Front	5	0.388	1.291	0.501	0.501	0.313		20.0		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.05	2680.00	41490	0.0	20.0	18.97	50	50	Front	5	0.309	1.268	0.392	0.392	0.245		21.1		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	-0.04	2680.00	41490	0.0	20.0	18.89	1	99	Bottom	10	0.113	1.291	0.146	0.146	0.091		25.4		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	-0.11	2680.00	41490	0.0	20.0	18.97	50	50	Bottom	10	0.118	1.268	0.150	0.150	0.094		25.2		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	0.08	2680.00	41490	0.0	20.0	18.89	1	99	Left	10	0.035	1.291	0.045	0.045	0.028		30.4		
Hotspot	LTE Band 41	20	QPSK	2	3719M	1:1.58	-0.14	2680.00	41490	0.0	20.0	18.97	50	50	Left	10	0.029	1.268	0.037	0.037	0.023		31.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-42 Plot A33

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.09	2593.00	40620	0.0	20.0	18.80	1	0	Back	5	0.454	1.318	0.598	0.598	0.374	Plot	19.2	19.2	17.0
Body-worn/Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.06	2593.00	40620	0.0	20.0	18.83	50	50	Back	5	0.420	1.309	0.550	0.550	0.344		19.6		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.02	2593.00	40620	0.0	20.0	18.80	1	0	Front	5	0.199	1.318	0.262	0.262	0.164		22.8		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.02	2593.00	40620	0.0	20.0	18.83	50	50	Front	5	0.202	1.309	0.264	0.264	0.165		22.8		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.03	2593.00	40620	0.0	20.0	18.80	1	0	Top	10	0.094	1.318	0.124	0.124	0.078		26.1		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.03	2593.00	40620	0.0	20.0	18.83	50	50	Top	10	0.086	1.309	0.113	0.113	0.071		26.5		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	-0.14	2593.00	40620	0.0	20.0	18.80	1	0	Right	10	0.051	1.318	0.067	0.067	0.042		28.7		
Hotspot	LTE Band 41	20	QPSK	4	3719M	1:1.58	0.00	2593.00	40620	0.0	20.0	18.83	50	50	Right	10	0.047	1.309	0.062	0.062	0.039		29.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.7 LTE Band 48 Standalone SAR

Table 12-43 Plot A34

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.07	3560.00	55340	0.0	17.0	16.95	1	99	Right Cheek	0	N/A	0.309	1.012	0.313	0.313	0.196	Plot	19.0	19.0	14.0
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.00	3560.00	55340	0.0	17.0	17.00	50	50	Right Cheek	0	N/A	0.300	1.000	0.300	0.300	0.188		19.2		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.01	3560.00	55340	0.0	17.0	16.95	1	99	Right Tilt	0	N/A	0.146	1.012	0.148	0.148	0.093		22.3		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.12	3560.00	55340	0.0	17.0	17.00	50	50	Right Tilt	0	N/A	0.148	1.000	0.148	0.148	0.093		22.3		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.04	3560.00	55340	0.0	17.0	16.95	1	99	Left Cheek	0	N/A	0.074	1.012	0.075	0.075	0.047		25.3		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.17	3560.00	55340	0.0	17.0	17.00	50	50	Left Cheek	0	N/A	0.078	1.000	0.078	0.078	0.049		25.1		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.05	3560.00	55340	0.0	17.0	16.95	1	99	Left Tilt	0	N/A	0.041	1.012	0.041	0.041	0.026		27.8		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.21	3560.00	55340	0.0	17.0	17.00	50	50	Left Tilt	0	N/A	0.040	1.000	0.040	0.040	0.025		28.0		
Head	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.07	3560.00	55340	0.0	17.0	17.00	1	99	Right Cheek	0	ULCA 4BC	0.305	1	0.305	0.305	0.191		19.2		
		20						3579.80	55538				1	0												
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-44 Plot A35

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Add'l Info	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.03	3560.00	55340	0.0	14.0	12.52	1	99	Back	5	N/A	0.334	1.406	0.470	0.470	0.294		14.3		
Body-worn/Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.01	3560.00	55340	0.0	14.0	12.60	50	50	Back	5	N/A	0.348	1.380	0.480	0.480	0.300		14.2		
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.10	3560.00	55340	0.0	14.0	12.52	1	99	Front	5	N/A	0.065	1.406	0.091	0.091	0.057		21.4		
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.07	3560.00	55340	0.0	14.0	12.60	50	50	Front	5	N/A	0.067	1.380	0.092	0.092	0.058		21.3		
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.20	3560.00	55340	0.0	14.0	12.52	1	99	Top	10	N/A	0.009	1.406	0.013	0.013	0.008		30.0	14.0	11.0
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	0.01	3560.00	55340	0.0	14.0	12.60	50	50	Top	10	N/A	0.009	1.380	0.012	0.012	0.008		30.1		
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.12	3560.00	55340	0.0	14.0	12.52	1	99	Left	10	N/A	0.095	1.406	0.134	0.134	0.084		19.7		
Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.01	3560.00	55340	0.0	14.0	12.60	50	50	Left	10	N/A	0.100	1.380	0.138	0.138	0.086		19.6		
Body-worn/Hotspot	LTE Band 48	20	QPSK	6	2051M	1:1.58	-0.01	3560.00	55340	0.0	14.0	12.59	50	50	Back	5	ULCA 48C	0.358	1.384	0.495	0.495	0.309	Plot	14.0		
		20						3579.80	55538				50	0												
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram											

12.8 NR Band n71 Standalone SAR

Table 12-45 Plot A36

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.04	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Right Cheek	0	0.183	1.377	0.252	0.252	0.158	Plot	30.0		
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.04	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Right Cheek	0	0.180	1.380	0.248	0.248	0.155		30.0		
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.16	680.50	136100	CP-OFDM	1.5	23.5	22.06	1	1	Right Cheek	0	0.143	1.393	0.199	0.245	0.153		29.5		
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.13	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Right Tilt	0	0.092	1.377	0.127	0.127	0.079		33.0		
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.13	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Right Tilt	0	0.094	1.380	0.130	0.130	0.081		32.8	29.5	24.4
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.11	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Left Cheek	0	0.161	1.377	0.222	0.222	0.139		30.5		
Head	NR Band n71	20	QPSK	1	2040M	1:1	-0.06	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Left Cheek	0	0.153	1.380	0.211	0.211	0.132		30.7		
Head	NR Band n71	20	QPSK	1	2040M	1:1	0.09	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Left Tilt	0	0.081	1.377	0.112	0.112	0.070		33.5		
Head	NR Band n71	20	QPSK	1	2040M	1:1	0.05	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Left Tilt	0	0.079	1.380	0.109	0.109	0.068		33.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 12-46 Plot A37

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	0.05	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Back	5	0.584	1.377	0.804	0.804	0.503	Plot	24.9		
Body-worn/Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.02	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Back	5	0.568	1.380	0.784	0.784	0.490		25.0		
Body-worn/Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.01	680.50	136100	DFT-s-OFDM	1.0	24.0	22.62	100	0	Back	5	0.413	1.374	0.567	0.698	0.436		25.4		
Body-worn/Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.06	680.50	136100	CP-OFDM	1.5	23.5	22.06	1	1	Back	5	0.322	1.393	0.449	0.619	0.387		26.0		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	0.01	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Front	5	0.202	1.377	0.278	0.278	0.174		29.5		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.05	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Front	5	0.198	1.380	0.273	0.273	0.171		29.6		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.06	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Bottom	10	0.213	1.377	0.293	0.293	0.183		29.3		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.04	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Bottom	10	0.215	1.380	0.297	0.297	0.186		29.3		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.04	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Right	10	0.380	1.377	0.523	0.523	0.327		26.8		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.03	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Right	10	0.369	1.380	0.509	0.509	0.318		26.9		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.01	680.50	136100	DFT-s-OFDM	0.0	25.0	23.61	1	53	Left	10	0.200	1.377	0.275	0.275	0.172		29.6		
Hotspot	NR Band n71	20	QPSK	1	2040M	1:1	-0.02	680.50	136100	DFT-s-OFDM	0.0	25.0	23.60	50	28	Left	10	0.195	1.380	0.269	0.269	0.168		29.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram											

12.9 NR Band n14 Standalone SAR

Table 12-47 Plot A38

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n14	10	QPSK	1	2040M	1:1	0.12	793.00	158600	DFT-s-OFDM	0.0	24.0	22.71	1	1	Right Cheek	0	0.189	1.346	0.254	0.254	0.159	Plot	28.9		
Head	NR Band n14	10	QPSK	1	2040M	1:1	-0.04	793.00	158600	DFT-s-OFDM	0.0	24.0	22.72	25	14	Right Cheek	0	0.186	1.343	0.250	0.250	0.156		29.0		
Head	NR Band n14	10	QPSK	1	2040M	1:1	-0.07	793.00	158600	CP-OFDM	1.5	22.5	21.15	1	1	Right Cheek	0	0.136	1.365	0.186	0.245	0.153		28.8		
Head	NR Band n14	10	QPSK	1	2059M	1:1	0.03	793.00	158600	DFT-s-OFDM	0.0	24.0	22.71	1	1	Right Tilt	0	0.109	1.346	0.147	0.147	0.092		31.3		
Head	NR Band n14	10	QPSK	1	2059M	1:1	-0.01	793.00	158600	DFT-s-OFDM	0.0	24.0	22.72	25	14	Right Tilt	0	0.111	1.343	0.149	0.149	0.093		31.2	28.8	23.7
Head	NR Band n14	10	QPSK	1	2059M	1:1	-0.03	793.00	158600	DFT-s-OFDM	0.0	24.0	22.71	1	1	Left Cheek	0	0.160	1.346	0.215	0.215	0.134		29.6		
Head	NR Band n14	10	QPSK	1	2059M	1:1	0.03	793.00	158600	DFT-s-OFDM	0.0	24.0	22.72	25	14	Left Cheek	0	0.149	1.343	0.200	0.200	0.125		30.0		
Head	NR Band n14	10	QPSK	1	2040M	1:1	-0.10	793.00	158600	DFT-s-OFDM	0.0	24.0	22.71	1	1	Left Tilt	0	0.088	1.346	0.118	0.118	0.074		32.2		
Head	NR Band n14	10	QPSK	1	2040M	1:1	-0.12	793.00	158600	DFT-s-OFDM	0.0	24.0	22.72	25	14	Left Tilt	0	0.092	1.343	0.124	0.124	0.078		32.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram											

Table 12-48 Plot A39

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n14	10	QPSK	1	1964M	1:1	0.02	793.00	158600	DFT-s-OFDM	0.0	23.0	21.91	1	1	Back	5	0.711	1.285	0.914	0.914	0.571		22.4		
Body-worn/Hotspot	NR Band n14	10	QPSK	1	1964M	1:1	0.00	793.00	158600	DFT-s-OFDM	0.0	23.0	21.99	25	14	Back	5	0.726	1.262	0.916	0.916	0.573	Plot	22.4		
Body-worn/Hotspot	NR Band n14	10	QPSK	1	1964M	1:1	0.00	793.00	158600	DFT-s-OFDM	0.0	23.0	21.90	50	0	Back	5	0.719	1.288	0.926	0.926	0.579		22.3		
Body-worn/Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.03	793.00	158600	CP-OFDM	0.5	22.5	21.33	1	1	Back	5	0.617	1.309	0.808	0.808	0.505		22.4		
Hotspot	NR Band n14	10	QPSK	1	1964M	1:1	0.02	793.00	158600	DFT-s-OFDM	0.0	23.0	21.91	1	1	Front	5	0.264	1.285	0.339	0.339	0.212		26.7		
Hotspot	NR Band n14	10	QPSK	1	1964M	1:1	0.02	793.00	158600	DFT-s-OFDM	0.0	23.0	21.99	25	14	Front	5	0.271	1.262	0.342	0.342	0.214		26.6		
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.03	793.00	158600	DFT-s-OFDM	0.0	23.0	21.91	1	1	Bottom	10	0.241	1.285	0.310	0.310	0.194		27.1	22.3	22.0
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.04	793.00	158600	DFT-s-OFDM	0.0	23.0	21.99	25	14	Bottom	10	0.251	1.262	0.317	0.317	0.198		27.0		
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	0.07	793.00	158600	DFT-s-OFDM	0.0	23.0	21.91	1	1	Right	10	0.192	1.285	0.247	0.247	0.154		28.1		
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.02	793.00	158600	DFT-s-OFDM	0.0	23.0	21.99	25	14	Right	10	0.186	1.262	0.235	0.235	0.147		28.3		
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.07	793.00	158600	DFT-s-OFDM	0.0	23.0	21.91	1	1	Left	10	0.081	1.285	0.104	0.104	0.065		31.8		
Hotspot	NR Band n14	10	QPSK	1	2040M	1:1	-0.05	793.00	158600	DFT-s-OFDM	0.0	23.0	21.99	25	14	Left	10	0.078	1.262	0.098	0.098	0.061		32.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram											

12.10 NR Band n5 Standalone SAR

Table 12-49 Plot A40

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n5	20	QPSK	1	1964M	1:1	0.04	836.50	167300	DFT-s-OFDM	0.0	25.0	23.91	1	1	Right Cheek	0	0.311	1.285	0.400	0.400	0.250		28.0		
Head	NR Band n5	20	QPSK	1	1964M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	25.0	23.79	50	28	Right Cheek	0	0.334	1.321	0.441	0.441	0.276	Plot	27.5		
Head	NR Band n5	20	QPSK	1	1964M	1:1	0.02	836.50	167300	CP-OFDM	1.5	23.5	22.42	1	1	Right Cheek	0	0.226	1.282	0.290	0.400	0.250		27.9		
Head	NR Band n5	20	QPSK	1	1964M	1:1	0.00	836.50	167300	DFT-s-OFDM	0.0	25.0	23.91	1	1	Right Tilt	0	0.165	1.285	0.212	0.212	0.133		30.7		
Head	NR Band n5	20	QPSK	1	1964M	1:1	-0.04	836.50	167300	DFT-s-OFDM	0.0	25.0	23.79	50	28	Right Tilt	0	0.170	1.321	0.225	0.225	0.141		30.5	27.5	24.9
Head	NR Band n5	20	QPSK	1	1964M	1:1	0.01	836.50	167300	DFT-s-OFDM	0.0	25.0	23.91	1	1	Left Cheek	0	0.245	1.285	0.315	0.315	0.197		29.0		
Head	NR Band n5	20	QPSK	1	1964M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	25.0	23.79	50	28	Left Cheek	0	0.248	1.321	0.328	0.328	0.205		28.8		
Head	NR Band n5	20	QPSK	1	1964M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	25.0	23.91	1	1	Left Tilt	0	0.156	1.285	0.200	0.200	0.125		31.0		
Head	NR Band n5	20	QPSK	1	1964M	1:1	0.06	836.50	167300	DFT-s-OFDM	0.0	25.0	23.79	50	28	Left Tilt	0	0.141	1.321	0.186	0.186	0.116		31.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-50 Plot A41

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	0.01	836.50	167300	DFT-s-OFDM	0.0	22.5	22.04	1	1	Back	5	0.674	1.112	0.749	0.749	0.468	Plot	22.7		
Body-worn/Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	22.5	22.06	50	28	Back	5	0.658	1.107	0.728	0.728	0.455		22.9		
Body-worn/Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.01	836.50	167300	CP-OFDM	0.0	22.5	21.95	1	1	Back	5	0.628	1.135	0.713	0.713	0.446		23.0		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.5	22.04	1	1	Front	5	0.232	1.112	0.258	0.258	0.161		27.4		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	22.5	22.06	50	28	Front	5	0.247	1.107	0.273	0.273	0.171		27.1		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.5	22.04	1	1	Bottom	10	0.140	1.112	0.156	0.156	0.098		29.6	22.7	21.5
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	22.5	22.06	50	28	Bottom	10	0.156	1.107	0.173	0.173	0.108		29.1		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	0.00	836.50	167300	DFT-s-OFDM	0.0	22.5	22.04	1	1	Right	10	0.134	1.112	0.149	0.149	0.093		29.7		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.12	836.50	167300	DFT-s-OFDM	0.0	22.5	22.06	50	28	Right	10	0.129	1.107	0.143	0.143	0.089		29.9		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	0.11	836.50	167300	DFT-s-OFDM	0.0	22.5	22.04	1	1	Left	10	0.070	1.112	0.078	0.078	0.049		32.6		
Hotspot	NR Band n5	20	QPSK	1	1964M	1:1	-0.11	836.50	167300	DFT-s-OFDM	0.0	22.5	22.06	50	28	Left	10	0.066	1.107	0.073	0.073	0.046		32.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.11 NR Band n70 Standalone SAR

Table 12-51

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.05	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.65	1	40	Right Cheek	0	0.335	1.216	0.407	0.427	0.267		27.4		
Head	NR Band n70	15	QPSK	2	4413M	1:1	-0.05	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.59	36	22	Right Cheek	0	0.335	1.233	0.413	0.432	0.270		27.3		
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.08	1702.50	340500	CP-OFDM	1.5	23.0	22.11	1	1	Right Cheek	0	0.235	1.227	0.288	0.427	0.267		27.4		
Head	NR Band n70	15	QPSK	2	4413M	1:1	-0.02	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.65	1	40	Right Tilt	0	0.189	1.216	0.230	0.241	0.151		29.9		
Head	NR Band n70	15	QPSK	2	4413M	1:1	-0.12	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.59	36	22	Right Tilt	0	0.184	1.233	0.227	0.238	0.149		29.9	27.3	24.7
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.65	1	40	Left Cheek	0	0.302	1.216	0.367	0.385	0.241		27.8		
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.07	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.59	36	22	Left Cheek	0	0.303	1.233	0.374	0.391	0.244		27.8		
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.65	1	40	Left Tilt	0	0.288	1.216	0.350	0.367	0.229		28.0		
Head	NR Band n70	15	QPSK	2	4413M	1:1	0.09	1702.50	340500	DFT-s-OFDM	0.0	24.5	23.59	36	22	Left Tilt	0	0.276	1.233	0.340	0.356	0.223		28.2		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-52 Plot A42

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.06	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.07	1	1	Right Cheek	0	0.144	1.239	0.178	0.178	0.111		26.5		
Head	NR Band n70	15	QPSK	4	3034M	1:1	-0.07	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.13	36	0	Right Cheek	0	0.144	1.222	0.176	0.176	0.110		26.5		
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.07	1	1	Right Tilt	0	0.264	1.239	0.327	0.327	0.204		23.8		
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.13	36	0	Right Tilt	0	0.267	1.222	0.326	0.326	0.204		23.8		
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.07	1	1	Left Cheek	0	0.344	1.239	0.426	0.426	0.266		22.7		
Head	NR Band n70	15	QPSK	4	3034M	1:1	-0.01	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.13	36	0	Left Cheek	0	0.353	1.222	0.431	0.431	0.269		22.6		
Head	NR Band n70	15	QPSK	4	3034M	1:1	-0.02	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.07	1	1	Left Tilt	0	0.375	1.239	0.465	0.465	0.291		22.3		
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.05	1702.50	340500	DFT-s-OFDM	0.0	20.0	19.13	36	0	Left Tilt	0	0.382	1.222	0.467	0.467	0.292		22.3		
Head	NR Band n70	15	QPSK	4	3034M	1:1	0.09	1702.50	340500	CP-OFDM	0.0	20.0	19.06	1	1	Left Tilt	0	0.396	1.242	0.492	0.492	0.308	Plot	22.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-53 Plot A43

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.06	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.97	1	77	Back	5	0.782	1.130	0.884	0.884	0.553		21.0		
Body-worn/Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	0.01	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.93	36	22	Back	5	0.782	1.140	0.891	0.891	0.557		21.0		
Body-worn/Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.03	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.91	75	0	Back	5	0.802	1.146	0.919	0.919	0.574		20.8		
Body-worn/Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.03	1702.50	340500	CP-OFDM	0.0	21.5	20.97	1	1	Back	5	0.825	1.130	0.932	0.932	0.583	Plot	20.8		
Body-worn/Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.03	1702.50	340500	CP-OFDM	0.0	21.5	20.97	1	1	Back	5	0.790	1.130	0.893	0.893	0.559		21.0		
Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.12	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.97	1	77	Front	5	0.730	1.130	0.825	0.825	0.516		21.3	20.8	20.5
Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.04	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.93	36	22	Front	5	0.702	1.140	0.800	0.800	0.500		21.4		
Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.10	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.91	75	0	Front	5	0.706	1.146	0.809	0.809	0.506		21.4		
Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	-0.11	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.97	1	77	Bottom	10	0.362	1.130	0.409	0.409	0.256		24.4		
Hotspot	NR Band n70	15	QPSK	2	1967M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.93	36	22	Bottom	10	0.384	1.140	0.438	0.438	0.274		24.1		
Hotspot	NR Band n70	15	QPSK	2	4413M	1:1	-0.04	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.97	1	77	Left	10	0.197	1.130	0.223	0.223	0.139		27.0		
Hotspot	NR Band n70	15	QPSK	2	4413M	1:1	-0.08	1702.50	340500	DFT-s-OFDM	0.0	21.5	20.93	36	22	Left	10	0.198	1.140	0.226	0.226	0.141		26.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue entry represents variability measurement

Table 12-54

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n70	15	QPSK	4	3027M	1:1	0.00	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.90	1	1	Back	5	0.417	1.288	0.537	0.537	0.336		22.7		
Body-worn/Hotspot	NR Band n70	15	QPSK	4	3027M	1:1	-0.06	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.92	36	0	Back	5	0.423	1.282	0.542	0.542	0.339		22.6		
Body-worn/Hotspot	NR Band n70	15	QPSK	4	3027M	1:1	0.00	1702.50	340500	CP-OFDM	0.0	21.0	19.91	1	1	Back	5	0.416	1.285	0.535	0.535	0.334		22.7		
Hotspot	NR Band n70	15	QPSK	4	1967M	1:1	-0.08	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.90	1	1	Front	5	0.279	1.288	0.359	0.359	0.224		24.4		
Hotspot	NR Band n70	15	QPSK	4	1967M	1:1	-0.04	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.92	36	0	Front	5	0.287	1.282	0.368	0.368	0.230		24.3	22.6	20.0
Hotspot	NR Band n70	15	QPSK	4	1967M	1:1	-0.07	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.90	1	1	Top	10	0.300	1.288	0.386	0.386	0.241		24.1		
Hotspot	NR Band n70	15	QPSK	4	1967M	1:1	-0.06	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.92	36	0	Top	10	0.305	1.282	0.391	0.391	0.244		24.1		
Hotspot	NR Band n70	15	QPSK	4	4413M	1:1	0.04	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.90	1	1	Right	10	0.049	1.288	0.063	0.063	0.039		32.0		
Hotspot	NR Band n70	15	QPSK	4	4413M	1:1	0.02	1702.50	340500	DFT-s-OFDM	0.0	21.0	19.92	36	0	Right	10	0.051	1.282	0.065	0.065	0.041		31.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.12 NR Band n66 Standalone SAR

Table 12-55

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n66	40	QPSK	2	4413M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.73	1	1	Right Cheek	0	0.331	1.194	0.395	0.395	0.247		27.5		
Head	NR Band n66	40	QPSK	2	4413M	1:1	0.09	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.74	108	54	Right Cheek	0	0.331	1.191	0.394	0.394	0.246		27.5		
Head	NR Band n66	40	QPSK	2	4413M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.73	1	1	Right Tilt	0	0.162	1.194	0.193	0.193	0.121		30.6		
Head	NR Band n66	40	QPSK	2	4413M	1:1	-0.04	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.74	108	54	Right Tilt	0	0.170	1.191	0.202	0.202	0.126		30.4		
Head	NR Band n66	40	QPSK	2	4413M	1:1	-0.21	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.73	1	1	Left Cheek	0	0.352	1.194	0.420	0.420	0.263		27.2	27.2	23.5
Head	NR Band n66	40	QPSK	2	4413M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.74	108	54	Left Cheek	0	0.337	1.191	0.401	0.401	0.251		27.4		
Head	NR Band n66	40	QPSK	2	4413M	1:1	0.05	1745.00	349000	CP-OFDM	1.5	23.0	22.20	1	1	Left Cheek	0	0.236	1.202	0.284	0.318	0.199		27.5		
Head	NR Band n66	40	QPSK	2	4413M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.73	1	1	Left Tilt	0	0.280	1.194	0.334	0.334	0.209		28.2		
Head	NR Band n66	40	QPSK	2	4413M	1:1	-0.05	1745.00	349000	DFT-s-OFDM	0.0	24.5	23.74	108	54	Left Tilt	0	0.268	1.191	0.319	0.319	0.199		28.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-56 Plot A44

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n66	40	QPSK	4	3034M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.52	1	1	Right Cheek	0	0.196	1.253	0.246	0.246	0.154		25.6		
Head	NR Band n66	40	QPSK	4	3034M	1:1	-0.04	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.58	108	0	Right Cheek	0	0.250	1.236	0.309	0.309	0.193		24.6		
Head	NR Band n66	40	QPSK	4	3027M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.52	1	1	Right Tilt	0	0.225	1.253	0.282	0.282	0.176		25.0		
Head	NR Band n66	40	QPSK	4	3027M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.58	108	0	Right Tilt	0	0.234	1.236	0.289	0.289	0.181		24.9		
Head	NR Band n66	40	QPSK	4	3027M	1:1	-0.16	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.52	1	1	Left Cheek	0	0.488	1.253	0.611	0.611	0.382		21.6	21.2	19.5
Head	NR Band n66	40	QPSK	4	3027M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.58	108	0	Left Cheek	0	0.550	1.236	0.680	0.680	0.425	Plot	21.2		
Head	NR Band n66	40	QPSK	4	3027M	1:1	0.00	1745.00	349000	CP-OFDM	0.0	20.5	19.48	1	1	Left Cheek	0	0.513	1.265	0.649	0.649	0.406		21.4		
Head	NR Band n66	40	QPSK	4	3027M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.52	1	1	Left Tilt	0	0.427	1.253	0.535	0.535	0.334		22.2		
Head	NR Band n66	40	QPSK	4	3027M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.58	108	0	Left Tilt	0	0.454	1.236	0.561	0.561	0.351		22.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-57 Plot A45

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.10	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.85	1	1	Back	5	0.571	1.161	0.663	0.663	0.414		21.3		
Body-worn/Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.93	108	0	Back	5	0.590	1.140	0.673	0.673	0.421	Plot	21.2		
Body-worn/Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.01	1745.00	349000	CP-OFDM	0.0	20.5	19.78	1	1	Back	5	0.585	1.180	0.690	0.690	0.431		21.1		
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.85	1	1	Front	5	0.451	1.161	0.524	0.524	0.328		22.3		
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	0.04	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.93	108	0	Front	5	0.475	1.140	0.542	0.542	0.339		22.1	21.1	19.5
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.16	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.85	1	1	Bottom	10	0.262	1.161	0.304	0.304	0.190		24.6		
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.93	108	0	Bottom	10	0.256	1.140	0.292	0.292	0.183		24.8		
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.85	1	1	Left	10	0.150	1.161	0.174	0.174	0.109		27.1		
Hotspot	NR Band n66	40	QPSK	2	4413M	1:1	-0.07	1745.00	349000	DFT-s-OFDM	0.0	20.5	19.93	108	0	Left	10	0.162	1.140	0.185	0.185	0.116		26.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-58

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n66	40	QPSK	4	3027M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.46	1	1	Back	5	0.531	1.271	0.675	0.675	0.422		22.2		
Body-worn/Hotspot	NR Band n66	40	QPSK	4	3027M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.51	108	0	Back	5	0.554	1.256	0.696	0.696	0.435		22.1		
Body-worn/Hotspot	NR Band n66	40	QPSK	4	3027M	1:1	-0.01	1745.00	349000	CP-OFDM	0.0	21.5	20.41	1	1	Back	5	0.541	1.285	0.695	0.695	0.434		22.1		
Hotspot	NR Band n66	40	QPSK	4	3027M	1:1	0.04	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.46	1	1	Front	5	0.400	1.271	0.508	0.508	0.318		23.4		
Hotspot	NR Band n66	40	QPSK	4	3027M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.51	108	0	Front	5	0.421	1.256	0.529	0.529	0.331		23.2	22.1	20.5
Hotspot	NR Band n66	40	QPSK	4	1967M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.46	1	1	Top	10	0.245	1.271	0.311	0.311	0.194		25.5		
Hotspot	NR Band n66	40	QPSK	4	1967M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.51	108	0	Top	10	0.227	1.256	0.285	0.285	0.178		25.9		
Hotspot	NR Band n66	40	QPSK	4	4413M	1:1	-0.01	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.46	1	1	Right	10	0.065	1.271	0.083	0.083	0.052		31.3		
Hotspot	NR Band n66	40	QPSK	4	4413M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	21.5	20.51	108	0	Right	10	0.070	1.256	0.088	0.088	0.055		31.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.13 NR Band n25 Standalone SAR

Table 12-59

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n25	40	QPSK	2	4413M	1:1	-0.21	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.19	1	108	Right Cheek	0	0.273	1.074	0.293	0.293	0.183		28.8		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.21	108	54	Right Cheek	0	0.286	1.069	0.306	0.306	0.191		28.6		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.09	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.19	1	108	Right Tilt	0	0.111	1.074	0.119	0.119	0.074		32.7		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.05	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.21	108	54	Right Tilt	0	0.113	1.069	0.121	0.121	0.076		32.7		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.19	1	108	Left Cheek	0	0.395	1.074	0.424	0.424	0.265		27.2		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.13	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.21	108	54	Left Cheek	0	0.392	1.069	0.419	0.419	0.262		27.3		
Head	NR Band n25	40	QPSK	2	4413M	1:1	0.01	1882.50	376500	CP-OFDM	1.5	23.0	22.38	1	1	Left Cheek	0	0.268	1.153	0.309	0.355	0.222		27.1		
Head	NR Band n25	40	QPSK	2	4413M	1:1	-0.20	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.19	1	108	Left Tilt	0	0.185	1.074	0.199	0.199	0.124		30.5		
Head	NR Band n25	40	QPSK	2	4413M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	24.5	24.21	108	54	Left Tilt	0	0.188	1.069	0.201	0.201	0.126		30.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-60 Plot A46

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n25	40	QPSK	4	3034M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	108	Right Cheek	0	0.306	1.175	0.360	0.360	0.225		21.4		
Head	NR Band n25	40	QPSK	4	3034M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.22	108	108	Right Cheek	0	0.308	1.197	0.369	0.369	0.231		21.3		
Head	NR Band n25	40	QPSK	4	3027M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	108	Right Tilt	0	0.188	1.175	0.221	0.221	0.138		23.5		
Head	NR Band n25	40	QPSK	4	3027M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.22	108	108	Right Tilt	0	0.185	1.197	0.221	0.221	0.138		23.5		
Head	NR Band n25	40	QPSK	4	3034M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	108	Left Cheek	0	0.612	1.175	0.719	0.719	0.449		18.4	18.0	17.0
Head	NR Band n25	40	QPSK	4	3034M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.22	108	108	Left Cheek	0	0.603	1.197	0.722	0.722	0.451		18.4		
Head	NR Band n25	40	QPSK	4	3034M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.21	216	0	Left Cheek	0	0.623	1.199	0.747	0.747	0.467		18.2		
Head	NR Band n25	40	QPSK	4	3034M	1:1	0.00	1882.50	376500	CP-OFDM	0.0	18.0	17.08	1	1	Left Cheek	0	0.636	1.236	0.786	0.786	0.491	Plot	18.0		
Head	NR Band n25	40	QPSK	4	3027M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.30	1	108	Left Tilt	0	0.381	1.175	0.448	0.448	0.280		20.5		
Head	NR Band n25	40	QPSK	4	3027M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	18.0	17.22	108	108	Left Tilt	0	0.389	1.197	0.466	0.466	0.291		20.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-61 Plot A47

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.15	1	108	Back	5	0.605	1.216	0.736	0.736	0.460	Plot	21.3		
Body-worn/Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.19	108	54	Back	5	0.596	1.205	0.718	0.718	0.449		21.4		
Body-worn/Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	-0.01	1882.50	376500	CP-OFDM	0.0	21.0	20.00	1	1	Back	5	0.604	1.259	0.760	0.760	0.475		21.2		
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	-0.08	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.15	1	108	Front	5	0.528	1.216	0.642	0.642	0.401		21.9		
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.19	108	54	Front	5	0.521	1.205	0.628	0.628	0.393		22.0	21.2	20.0
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.15	1	108	Bottom	10	0.357	1.216	0.434	0.434	0.271		23.6		
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.19	108	54	Bottom	10	0.341	1.205	0.411	0.411	0.257		23.8		
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.15	1	108	Left	10	0.134	1.216	0.163	0.163	0.102		27.9		
Hotspot	NR Band n25	40	QPSK	2	4413M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.19	108	54	Left	10	0.135	1.205	0.163	0.163	0.102		27.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-62

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.03	1	108	Back	5	0.436	1.250	0.545	0.545	0.341		23.6		
Body-worn/Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	20.96	108	108	Back	5	0.384	1.271	0.488	0.488	0.305		24.1		
Body-worn/Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	0.00	1882.50	376500	CP-OFDM	0.0	22.0	20.81	1	1	Back	5	0.492	1.315	0.647	0.647	0.404		22.9		
Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.03	1	108	Front	5	0.366	1.250	0.458	0.458	0.286		24.4		
Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	-0.03	1882.50	376500	DFT-s-OFDM	0.0	22.0	20.96	108	108	Front	5	0.362	1.271	0.460	0.460	0.288		24.4	22.9	21.0
Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.03	1	108	Top	10	0.178	1.250	0.223	0.223	0.139		27.5		
Hotspot	NR Band n25	40	QPSK	4	1967M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	22.0	20.96	108	108	Top	10	0.185	1.271	0.235	0.235	0.147		27.3		
Hotspot	NR Band n25	40	QPSK	4	4413M	1:1	-0.12	1882.50	376500	DFT-s-OFDM	0.0	22.0	21.03	1	108	Right	10	0.100	1.250	0.125	0.125	0.078		30.0		
Hotspot	NR Band n25	40	QPSK	4	4413M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	22.0	20.96	108	108	Right	10	0.115	1.271	0.146	0.146	0.091		29.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram									

12.14 NR Band n30 Standalone SAR

Table 12-63

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n30	10	QPSK	2	2085M	1:1	-0.09	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.55	1	50	Right Cheek	0	0.192	1.396	0.268	0.268	0.168		28.7		
Head	NR Band n30	10	QPSK	2	2085M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.52	25	14	Right Cheek	0	0.191	1.406	0.271	0.271	0.169		28.6		
Head	NR Band n30	10	QPSK	2	2085M	1:1	-0.08	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.55	1	50	Right Tilt	0	0.103	1.396	0.144	0.144	0.090		31.4		
Head	NR Band n30	10	QPSK	2	2085M	1:1	0.09	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.52	25	14	Right Tilt	0	0.096	1.406	0.135	0.135	0.084		31.7		
Head	NR Band n30	10	QPSK	2	3709M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.55	1	50	Left Cheek	0	0.334	1.396	0.466	0.466	0.291		26.3	26.3	23.9
Head	NR Band n30	10	QPSK	2	3709M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.52	25	14	Left Cheek	0	0.326	1.406	0.458	0.458	0.286		26.4		
Head	NR Band n30	10	QPSK	2	3709M	1:1	-0.08	2310.00	462000	CP-OFDM	1.5	22.5	21.05	1	1	Left Cheek	0	0.110	1.396	0.154	0.212	0.133		29.6		
Head	NR Band n30	10	QPSK	2	3709M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.55	1	50	Left Tilt	0	0.062	1.396	0.087	0.087	0.054		33.6		
Head	NR Band n30	10	QPSK	2	3709M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	24.0	22.52	25	14	Left Tilt	0	0.061	1.406	0.086	0.086	0.054		33.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-64 Plot A48

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n30	10	QPSK	4	4493M	1:1	-0.02	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.94	1	1	Right Cheek	0	0.360	1.138	0.410	0.410	0.256		18.4		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.87	25	0	Right Cheek	0	0.349	1.156	0.403	0.403	0.252		18.4		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.07	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.94	1	1	Right Tilt	0	0.192	1.138	0.218	0.218	0.136		21.1		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.00	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.87	25	0	Right Tilt	0	0.185	1.156	0.214	0.214	0.134		21.2		
Head	NR Band n30	10	QPSK	4	3027M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.94	1	1	Left Cheek	0	0.608	1.138	0.692	0.692	0.433		16.1	15.4	14.5
Head	NR Band n30	10	QPSK	4	3027M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.87	25	0	Left Cheek	0	0.576	1.156	0.666	0.666	0.416		16.2		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.86	50	0	Left Cheek	0	0.685	1.159	0.794	0.794	0.496		15.5		
Head	NR Band n30	10	QPSK	4	4493M	1:1	-0.01	2310.00	462000	CP-OFDM	0.0	15.5	15.01	1	1	Left Cheek	0	0.727	1.119	0.814	0.814	0.509	Plot	15.4		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.07	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.94	1	1	Left Tilt	0	0.345	1.138	0.393	0.393	0.246		18.5		
Head	NR Band n30	10	QPSK	4	4493M	1:1	0.04	2310.00	462000	DFT-s-OFDM	0.0	15.5	14.87	25	0	Left Tilt	0	0.313	1.156	0.362	0.362	0.226		18.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-65 Plot A49/A50

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.13	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.01	1	1	Back	5	0.594	1.409	0.837	0.837	0.523	Plot	21.3		
Body-worn/Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.05	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.05	25	14	Back	5	0.579	1.396	0.808	0.808	0.505		21.4		
Body-worn/Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.00	50	0	Back	5	0.572	1.413	0.808	0.808	0.505		21.4		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.16	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.01	1	1	Front	5	0.614	1.409	0.865	0.865	0.541	Plot	21.1		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.07	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.05	25	14	Front	5	0.589	1.396	0.822	0.822	0.514		21.3		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.05	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.00	50	0	Front	5	0.596	1.413	0.842	0.842	0.526		21.2	21.1	20.5
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.01	2310.00	462000	CP-OFDM	0.0	21.5	19.98	1	1	Front	5	0.507	1.419	0.719	0.719	0.449		21.9		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	0.01	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.01	1	1	Bottom	10	0.365	1.409	0.514	0.514	0.321		23.4		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.08	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.05	25	14	Bottom	10	0.361	1.396	0.504	0.504	0.315		23.5		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.01	1	1	Left	10	0.139	1.409	0.196	0.196	0.123		27.6		
Hotspot	NR Band n30	10	QPSK	2	2085M	1:1	-0.05	2310.00	462000	DFT-s-OFDM	0.0	21.5	20.05	25	14	Left	10	0.135	1.396	0.188	0.188	0.118		27.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-66

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	0.16	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.61	1	1	Back	5	0.318	1.377	0.438	0.438	0.274		22.6		
Body-worn/Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	0.03	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.47	25	14	Back	5	0.332	1.422	0.472	0.472	0.295		22.2		
Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	0.02	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.61	1	1	Front	5	0.592	1.377	0.815	0.815	0.509		19.9		
Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	-0.01	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.47	25	14	Front	5	0.562	1.422	0.799	0.799	0.499		20.0		
Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	-0.04	2310.00	462000	CP-OFDM	0.0	20.0	18.55	1	1	Front	5	0.562	1.396	0.785	0.785	0.491		20.0	19.9	19.0
Hotspot	NR Band n30	10	QPSK	4	2085M	1:1	0.07	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.61	1	1	Top	10	0.216	1.377	0.297	0.297	0.186		24.2		
Hotspot	NR Band n30	10	QPSK	4	2085M	1:1	-0.06	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.47	25	14	Top	10	0.215	1.422	0.306	0.306	0.191		24.1		
Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	0.05	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.61	1	1	Right	10	0.189	1.377	0.260	0.260	0.163		24.8		
Hotspot	NR Band n30	10	QPSK	4	4506M	1:1	-0.03	2310.00	462000	DFT-s-OFDM	0.0	20.0	18.47	25	14	Right	10	0.173	1.422	0.246	0.246	0.154		25.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.15 NR Band n41 Standalone SAR

Table 12-67 Plot A51

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.09	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Right Cheek	0	0.060	1.197	0.072	0.072	0.045		28.4		
Head	NR Band n41	100	QPSK	2	2085M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Right Cheek	0	0.058	1.242	0.072	0.072	0.045		28.4		
Head	NR Band n41	100	QPSK	2	2085M	1:1	0.08	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Right Tilt	0	0.044	1.197	0.053	0.053	0.033		29.8		
Head	NR Band n41	100	QPSK	2	2085M	1:1	0.08	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Right Tilt	0	0.047	1.242	0.058	0.058	0.036		29.3		
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Left Cheek	0	0.072	1.197	0.086	0.086	0.054		27.6	26.9	17.0
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Left Cheek	0	0.072	1.242	0.089	0.089	0.056		27.5		
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.03	2592.99	518598	CP-OFDM	0.0	18.0	16.76	1	1	Left Cheek	0	0.076	1.330	0.101	0.101	0.063	Plot	26.9		
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Left Tilt	0	0.021	1.197	0.025	0.025	0.016		33.0		
Head	NR Band n41	100	QPSK	2	3719M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Left Tilt	0	0.019	1.242	0.024	0.024	0.015		33.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-68 Plot A52/A53

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n41	100	QPSK	2	3719M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Back	5	0.372	1.197	0.445	0.445	0.278	Plot	20.5		
Body-worn/Hotspot	NR Band n41	100	QPSK	2	3719M	1:1	0.06	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Back	5	0.347	1.242	0.431	0.431	0.269		20.6		
Hotspot	NR Band n41	100	QPSK	2	3719M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Front	5	0.417	1.197	0.499	0.499	0.312		20.0		
Hotspot	NR Band n41	100	QPSK	2	3719M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Front	5	0.523	1.242	0.650	0.650	0.406	Plot	18.9		
Hotspot	NR Band n41	100	QPSK	2	3027M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	18.0	16.89	270	0	Front	5	0.412	1.291	0.532	0.532	0.333		19.7		
Hotspot	NR Band n41	100	QPSK	2	3719M	1:1	0.09	2592.99	518598	CP-OFDM	0.0	18.0	16.76	1	1	Front	5	0.475	1.330	0.632	0.632	0.395		19.0		
Hotspot	NR Band n41	100	QPSK	2	2085M	1:1	-0.15	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Bottom	10	0.148	1.197	0.177	0.177	0.111		24.5		
Hotspot	NR Band n41	100	QPSK	2	2085M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Bottom	10	0.148	1.242	0.184	0.184	0.115		24.3		
Hotspot	NR Band n41	100	QPSK	2	2085M	1:1	-0.13	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.22	1	271	Left	10	0.080	1.197	0.096	0.096	0.060		27.2		
Hotspot	NR Band n41	100	QPSK	2	2085M	1:1	-0.11	2592.99	518598	DFT-s-OFDM	0.0	18.0	17.06	135	138	Left	10	0.080	1.242	0.099	0.099	0.062		27.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.16 NR Band n48 Standalone SAR

Table 12-69

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n48	40	QPSK	6	2858M	1:1	-0.09	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.59	1	1	Right Cheek	0	0.097	1.099	0.107	0.107	0.067		23.7		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.07	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.42	50	0	Right Cheek	0	0.099	1.143	0.113	0.113	0.071		23.4		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.06	3570.00	638000	CP-OFDM	0.0	15.0	14.57	1	1	Right Cheek	0	0.101	1.104	0.112	0.112	0.070		23.5		
Head	NR Band n48	40	QPSK	6	2858M	1:1	-0.01	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.59	1	1	Right Tilt	0	0.057	1.099	0.063	0.063	0.039		26.0		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.02	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.42	50	0	Right Tilt	0	0.055	1.143	0.063	0.063	0.039		26.0	23.4	14.0
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.07	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.59	1	1	Left Cheek	0	0.024	1.099	0.026	0.026	0.016		29.8		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.07	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.42	50	0	Left Cheek	0	0.022	1.143	0.025	0.025	0.016		30.0		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.05	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.59	1	1	Left Tilt	0	0.013	1.099	0.014	0.014	0.009		32.4		
Head	NR Band n48	40	QPSK	6	2858M	1:1	0.01	3570.00	638000	DFT-s-OFDM	0.0	15.0	14.42	50	0	Left Tilt	0	0.013	1.143	0.015	0.015	0.009		32.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-70 Plot A54

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n48	40	8	2051M	1:1	-0.03	3679.98	645332	CW/SRS	16.0	15.66	Right Cheek	0	0.196	1.081	0.212	0.212	0.133		21.7		
Head	NR Band n48	40	8	2051M	1:1	0.02	3679.98	645332	CW/SRS	16.0	15.66	Right Tilt	0	0.154	1.081	0.166	0.166	0.104		22.8		
Head	NR Band n48	40	8	2051M	1:1	0.01	3679.98	645332	CW/SRS	16.0	15.66	Left Cheek	0	0.548	1.081	0.592	0.592	0.370	Plot	17.3	17.3	15.0
Head	NR Band n48	40	8	2051M	1:1	-0.03	3679.98	645332	CW/SRS	16.0	15.66	Left Tilt	0	0.338	1.081	0.365	0.365	0.228		19.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																						
														Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-71

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n48	40	2	4506M	1:1	0.02	3570.00	638000	CW/SRS	16.0	15.42	Right Cheek	0	0.009	1.143	0.010	0.010	0.006		34.9		
Head	NR Band n48	40	2	4506M	1:1	0.01	3570.00	638000	CW/SRS	16.0	15.42	Right Tilt	0	0.004	1.143	0.005	0.005	0.003		38.4		
Head	NR Band n48	40	2	4506M	1:1	0.07	3570.00	638000	CW/SRS	16.0	15.42	Left Cheek	0	0.012	1.143	0.014	0.014	0.009		33.6	33.6	15.0
Head	NR Band n48	40	2	4506M	1:1	0.06	3570.00	638000	CW/SRS	16.0	15.42	Left Tilt	0	0.003	1.143	0.003	0.003	0.002		39.6		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																						
														Head 1.6 W/kg (mW/g) averaged over 1 gram								

Table 12-72

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n48	40	4	2051M	1:1	0.05	3570.00	638000	CW/SRS	16.0	15.78	Right Cheek	0	0.144	1.052	0.151	0.151	0.094		23.2	20.4	15.0
Head	NR Band n48	40	4	2051M	1:1	0.08	3570.00	638000	CW/SRS	16.0	15.78	Right Tilt	0	0.142	1.052	0.149	0.149	0.093		23.2		
Head	NR Band n48	40	4	2051M	1:1	0.03	3570.00	638000	CW/SRS	16.0	15.78	Left Cheek	0	0.270	1.052	0.284	0.284	0.178		20.4		
Head	NR Band n48	40	4	2051M	1:1	-0.04	3570.00	638000	CW/SRS	16.0	15.78	Left Tilt	0	0.252	1.052	0.265	0.265	0.166		20.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-73

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.01	3570.00	638000	DFT-s-OFDM	0.0	13.5	13.16	1	1	Back	5	0.521	1.081	0.563	0.563	0.352		15.0	14.1	12.5
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.00	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.48	1	1	Back	5	0.523	1.265	0.662	0.662	0.414		14.3		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.00	3679.98	645332	DFT-s-OFDM	0.0	13.5	12.50	1	1	Back	5	0.548	1.259	0.690	0.690	0.431		14.1		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.01	3570.00	638000	DFT-s-OFDM	0.0	13.5	12.93	50	0	Back	5	0.517	1.140	0.589	0.589	0.368		14.8		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.00	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.24	50	0	Back	5	0.516	1.337	0.690	0.690	0.431		14.1		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.03	3679.98	645332	DFT-s-OFDM	0.0	13.5	12.24	50	28	Back	5	0.519	1.337	0.694	0.694	0.434		14.1		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	-0.01	3570.00	638000	DFT-s-OFDM	0.0	13.5	12.91	100	0	Back	5	0.527	1.146	0.604	0.604	0.378		14.7		
Body-worn/Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.02	3570.00	638000	CP-OFDM	0.0	13.5	13.14	1	1	Back	5	0.552	1.086	0.599	0.599	0.374		14.7		
Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	0.08	3570.00	638000	DFT-s-OFDM	0.0	13.5	13.16	1	1	Front	5	0.096	1.081	0.104	0.104	0.065		22.3		
Hotspot	NR Band n48	40	QPSK	6	4506M	1:1	-0.05	3570.00	638000	DFT-s-OFDM	0.0	13.5	12.93	50	0	Front	5	0.098	1.140	0.112	0.112	0.070		22.0		
Hotspot	NR Band n48	40	QPSK	6	2059M	1:1	0.03	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.48	1	1	Top	10	0.023	1.265	0.029	0.029	0.018		27.8		
Hotspot	NR Band n48	40	QPSK	6	2059M	1:1	0.01	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.24	50	0	Top	10	0.024	1.337	0.032	0.032	0.020		27.4		
Hotspot	NR Band n48	40	QPSK	6	2059M	1:1	-0.09	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.48	1	1	Left	10	0.201	1.265	0.254	0.254	0.159		18.4		
Hotspot	NR Band n48	40	QPSK	6	2059M	1:1	0.00	3624.99	641666	DFT-s-OFDM	0.0	13.5	12.24	50	0	Left	10	0.211	1.337	0.282	0.282	0.176		18.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-74

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n48	40	8	4506M	1:1	0.09	3570.00	638000	CW/SRS	15.0	14.28	Back	5	0.362	1.180	0.427	0.427	0.267		17.7	17.7	14.0
Hotspot	NR Band n48	40	8	4506M	1:1	0.13	3570.00	638000	CW/SRS	15.0	14.28	Front	5	0.124	1.180	0.146	0.146	0.091		22.3		
Hotspot	NR Band n48	40	8	4506M	1:1	0.05	3570.00	638000	CW/SRS	15.0	14.28	Top	10	0.034	1.180	0.040	0.040	0.025		27.9		
Hotspot	NR Band n48	40	8	4506M	1:1	-0.02	3570.00	638000	CW/SRS	15.0	14.28	Right	10	0.171	1.180	0.202	0.202	0.126		20.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-75 Plot A55

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n48	40	2	2051M	1:1	-0.06	3570.00	638000	CW/SRS	16.0	15.42	Back	5	0.815	1.143	0.932	0.932	0.583	Plot	15.3	15.3	15.0
Body-worn/Hotspot	NR Band n48	40	2	2059M	1:1	-0.02	3570.00	638000	CW/SRS	16.0	15.42	Back	5	0.757	1.143	0.865	0.865	0.541		15.6		
Body-worn/Hotspot	NR Band n48	40	2	2051M	1:1	-0.02	3624.99	641666	CW/SRS	16.0	15.13	Back	5	0.750	1.222	0.917	0.917	0.573		15.4		
Body-worn/Hotspot	NR Band n48	40	2	2051M	1:1	0.02	3679.98	645332	CW/SRS	16.0	15.31	Back	5	0.665	1.172	0.779	0.779	0.487		16.1		
Hotspot	NR Band n48	40	2	2051M	1:1	-0.10	3570.00	638000	CW/SRS	16.0	15.42	Front	5	0.325	1.143	0.371	0.371	0.232		19.3		
Hotspot	NR Band n48	40	2	2051M	1:1	0.04	3570.00	638000	CW/SRS	16.0	15.42	Bottom	10	0.151	1.143	0.173	0.173	0.108		22.6		
Hotspot	NR Band n48	40	2	2051M	1:1	0.00	3570.00	638000	CW/SRS	16.0	15.42	Left	10	0.250	1.143	0.286	0.286	0.179		20.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue entry represents variability measurement

Table 12-76

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n48	40	4	2051M	1:1	-0.01	3570.00	638000	CW/SRS	16.0	15.78	Back	5	0.427	1.052	0.449	0.449	0.281		18.5	18.5	15.0
Hotspot	NR Band n48	40	4	2051M	1:1	0.03	3570.00	638000	CW/SRS	16.0	15.78	Front	5	0.121	1.052	0.127	0.127	0.079		23.9		
Hotspot	NR Band n48	40	4	2051M	1:1	-0.01	3570.00	638000	CW/SRS	16.0	15.78	Top	10	0.102	1.052	0.107	0.107	0.067		24.7		
Hotspot	NR Band n48	40	4	2051M	1:1	0.04	3570.00	638000	CW/SRS	16.0	15.78	Right	10	0.042	1.052	0.044	0.044	0.028		28.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.17 NR Band n77 Standalone SAR

Table 12-77

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n77 DoD	100	QPSK	6	2858M	1:1	0.07	3500.01	633334	DFT-s-OFDM	0.0	16.0	15.58	1	1	Right Cheek	0	0.134	1.102	0.148	0.148	0.093		23.3	22.1	15.0
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.09	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.86	1	137	Right Cheek	0	0.146	1.300	0.190	0.190	0.119		22.2		
Head	NR Band n77	100	QPSK	6	2858M	1:1	-0.13	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.74	135	69	Right Cheek	0	0.138	1.337	0.185	0.185	0.116		22.3		
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.17	3930.00	662000	CP-OFDM	0.0	16.0	14.73	1	1	Right Cheek	0	0.126	1.340	0.169	0.169	0.106		22.7		
Head	NR Band n77	25	QPSK	6	2858M	1:1	0.02	3930.00	662000	CP-OFDM	0.0	16.0	15.59	1	1	Right Cheek	0	0.178	1.099	0.196	0.196	0.123		22.1		
Head	NR Band n77	100	QPSK	6	2858M	1:1	-0.03	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.86	1	137	Right Tilt	0	0.106	1.300	0.138	0.138	0.086		23.6		
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.02	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.74	135	69	Right Tilt	0	0.107	1.337	0.143	0.143	0.089		23.4		
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.07	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.86	1	137	Left Cheek	0	0.040	1.300	0.052	0.052	0.033		27.8		
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.12	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.74	135	69	Left Cheek	0	0.040	1.337	0.053	0.053	0.033		27.7		
Head	NR Band n77	100	QPSK	6	2858M	1:1	-0.13	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.86	1	137	Left Tilt	0	0.040	1.300	0.052	0.052	0.033		27.8		
Head	NR Band n77	100	QPSK	6	2858M	1:1	0.06	3930.00	662000	DFT-s-OFDM	0.0	16.0	14.74	135	69	Left Tilt	0	0.042	1.337	0.056	0.056	0.035		27.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-78

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n77	100	8	4506M	1:1	0.09	3930.00	662000	CW/SRS	18.0	17.62	Right Cheek	0	0.093	1.091	0.101	0.101	0.063		26.9		
Head	NR Band n77	100	8	4506M	1:1	0.03	3930.00	662000	CW/SRS	18.0	17.62	Right Tilt	0	0.068	1.091	0.074	0.074	0.046		28.3		
Head	NR Band n77 DoD	100	8	4506M	1:1	0.04	3500.01	633334	CW/SRS	18.0	16.02	Left Cheek	0	0.111	1.578	0.175	0.175	0.109		24.5	22.5	17.0
Head	NR Band n77	100	8	4506M	1:1	-0.02	3930.00	662000	CW/SRS	18.0	17.62	Left Cheek	0	0.258	1.091	0.281	0.281	0.176		22.5		
Head	NR Band n77	100	8	4506M	1:1	0.01	3930.00	662000	CW/SRS	18.0	17.62	Left Tilt	0	0.163	1.091	0.178	0.178	0.111		24.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-79

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n77	100	2	4506M	1:1	0.08	3930.00	662000	CW/SRS	18.0	17.33	Right Cheek	0	0.003	1.167	0.004	0.004	0.003		41.5		
Head	NR Band n77	100	2	4506M	1:1	0.01	3930.00	662000	CW/SRS	18.0	17.33	Right Tilt	0	0.000	1.167	0.000	0.000	0.000		56.3		
Head	NR Band n77 DoD	100	2	4506M	1:1	0.04	3500.01	633334	CW/SRS	18.0	16.77	Left Cheek	0	0.057	1.327	0.076	0.076	0.048		28.2	28.2	17.0
Head	NR Band n77	100	2	4506M	1:1	0.06	3930.00	662000	CW/SRS	18.0	17.33	Left Cheek	0	0.008	1.167	0.009	0.009	0.006		37.3		
Head	NR Band n77	100	2	4506M	1:1	0.05	3930.00	662000	CW/SRS	18.0	17.33	Left Tilt	0	0.000	1.167	0.000	0.000	0.000		56.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-80 Plot A56

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	NR Band n77	100	4	2858M	1:1	-0.07	3930.00	662000	CW/SRS	16.0	15.19	Right Cheek	0	0.183	1.205	0.221	0.221	0.138		21.5		
Head	NR Band n77	100	4	2858M	1:1	0.02	3930.00	662000	CW/SRS	16.0	15.19	Right Tilt	0	0.178	1.205	0.214	0.214	0.134		21.7		
Head	NR Band n77 DoD	100	4	2858M	1:1	0.08	3500.01	633334	CW/SRS	16.0	15.56	Left Cheek	0	0.085	1.107	0.094	0.094	0.059		25.2		
Head	NR Band n77	100	4	2858M	1:1	0.02	3750.00	650000	CW/SRS	16.0	14.74	Left Cheek	0	0.533	1.337	0.713	0.713	0.446		16.5	16.5	15.0
Head	NR Band n77	100	4	2858M	1:1	0.02	3930.00	662000	CW/SRS	16.0	15.19	Left Cheek	0	0.586	1.205	0.706	0.706	0.441	Plot	16.5		
Head	NR Band n77	100	4	2858M	1:1	-0.05	3750.00	650000	CW/SRS	16.0	14.74	Left Tilt	0	0.475	1.337	0.635	0.635	0.397		17.0		
Head	NR Band n77	100	4	2858M	1:1	-0.07	3930.00	662000	CW/SRS	16.0	15.19	Left Tilt	0	0.514	1.205	0.619	0.619	0.387		17.1		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Head 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-81

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	MPR [dB]	Max Allowed Power [dBm]	Conducted Power [dBm]	RB Size	RB Offset	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	15.0	13.74	1	271	Back	5	0.454	1.337	0.607	0.607	0.379		16.2		
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.02	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.75	1	137	Back	5	0.438	1.334	0.584	0.584	0.365		16.3		
Body-worn/Hotspot	NR Band n77 DoD	100	QPSK	6	4506M	1:1	-0.01	3500.01	633334	DFT-s-OFDM	0.0	15.0	14.56	135	0	Back	5	0.551	1.107	0.610	0.610	0.381		16.1		
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	15.0	13.58	135	69	Back	5	0.481	1.387	0.667	0.667	0.417		15.7		
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.73	135	69	Back	5	0.435	1.340	0.583	0.583	0.364		16.3		
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	0.02	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.68	270	0	Back	5	0.420	1.355	0.569	0.569	0.356		16.4		
Body-worn/Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.01	3930.00	662000	CP-OFDM	0.0	15.0	13.51	1	1	Back	5	0.444	1.409	0.626	0.626	0.391		16.0	15.7	14.0
Body-worn/Hotspot	NR Band n77	25	QPSK	6	4506M	1:1	0.02	3930.00	662000	CP-OFDM	0.0	15.0	14.32	1	1	Back	5	0.464	1.169	0.542	0.542	0.339		16.6		
Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	0.03	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.75	1	137	Front	5	0.100	1.334	0.133	0.133	0.083		22.7		
Hotspot	NR Band n77	100	QPSK	6	4506M	1:1	-0.13	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.73	135	69	Front	5	0.097	1.340	0.130	0.130	0.081		22.8		
Hotspot	NR Band n77	100	QPSK	6	2059M	1:1	0.08	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.75	1	137	Top	10	0.032	1.334	0.043	0.043	0.027		27.7		
Hotspot	NR Band n77	100	QPSK	6	2059M	1:1	0.07	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.73	135	69	Top	10	0.034	1.340	0.046	0.046	0.029		27.4		
Hotspot	NR Band n77	100	QPSK	6	2059M	1:1	-0.14	3930.00	662000	DFT-s-OFDM	0.0	15.0	13.75	1	137	Left	10	0.136	1.334	0.181	0.181	0.113		21.4		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-82

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n77 DoD	100	8	4506M	1:1	0.08	3500.01	633334	CW/SRS	18.0	16.02	Back	5	0.242	1.578	0.382	0.382	0.239		21.2		
Body-worn/Hotspot	NR Band n77	100	8	4506M	1:1	-0.04	3750.00	650000	CW/SRS	18.0	16.65	Back	5	0.431	1.365	0.588	0.588	0.368		19.3		
Body-worn/Hotspot	NR Band n77	100	8	4506M	1:1	0.01	3930.00	662000	CW/SRS	18.0	17.62	Back	5	0.568	1.091	0.620	0.620	0.388		19.1		
Hotspot	NR Band n77	100	8	4506M	1:1	0.02	3930.00	662000	CW/SRS	18.0	17.62	Front	5	0.155	1.091	0.169	0.169	0.106		24.7	19.1	17.0
Hotspot	NR Band n77	100	8	4506M	1:1	-0.12	3930.00	662000	CW/SRS	18.0	17.62	Top	10	0.040	1.091	0.044	0.044	0.028		30.6		
Hotspot	NR Band n77	100	8	4506M	1:1	-0.02	3930.00	662000	CW/SRS	18.0	17.62	Right	10	0.194	1.091	0.212	0.212	0.133		23.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-83 Plot A57

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n77 DoD	100	2	2059M	1:1	0.04	3500.01	633334	CW/SRS	18.0	16.77	Back	5	0.278	1.327	0.369	0.369	0.231		21.3		
Body-worn/Hotspot	NR Band n77	100	2	2059M	1:1	-0.01	3750.00	650000	CW/SRS	18.0	16.08	Back	5	0.530	1.556	0.825	0.825	0.516		17.8		
Body-worn/Hotspot	NR Band n77	100	2	2059M	1:1	-0.09	3930.00	662000	CW/SRS	18.0	17.33	Back	5	0.647	1.167	0.755	0.755	0.472	Plot	18.2		
Hotspot	NR Band n77	100	2	2059M	1:1	0.00	3930.00	662000	CW/SRS	18.0	17.33	Front	5	0.286	1.167	0.334	0.334	0.209		21.7	17.8	17.0
Hotspot	NR Band n77	100	2	2059M	1:1	0.09	3930.00	662000	CW/SRS	18.0	17.33	Bottom	10	0.146	1.167	0.170	0.170	0.106		24.7		
Hotspot	NR Band n77	100	2	2059M	1:1	0.05	3930.00	662000	CW/SRS	18.0	17.33	Left	10	0.198	1.167	0.231	0.231	0.144		23.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-84

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Waveform	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Reported 1g SAR [W/kg]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Body-worn/Hotspot	NR Band n77 DoD	100	4	4506M	1:1	0.00	3500.01	633334	CW/SRS	16.0	15.56	Back	5	0.185	1.107	0.205	0.205	0.128		21.9	16.7	15.0
Body-worn/Hotspot	NR Band n77	100	4	4506M	1:1	0.02	3750.00	650000	CW/SRS	16.0	14.74	Back	5	0.500	1.337	0.669	0.669	0.418		16.7		
Body-worn/Hotspot	NR Band n77	100	4	4506M	1:1	-0.04	3930.00	662000	CW/SRS	16.0	15.19	Back	5	0.381	1.205	0.459	0.459	0.287		18.4		
Hotspot	NR Band n77	100	4	4506M	1:1	-0.02	3930.00	662000	CW/SRS	16.0	15.19	Front	5	0.222	1.205	0.268	0.268	0.168		20.7		
Hotspot	NR Band n77	100	4	2059M	1:1	-0.01	3930.00	662000	CW/SRS	16.0	15.19	Top	10	0.197	1.205	0.237	0.237	0.148		21.2		
Hotspot	NR Band n77	100	4	2059M	1:1	0.06	3930.00	662000	CW/SRS	16.0	15.19	Right	10	0.122	1.205	0.147	0.147	0.092		23.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.18 2.4 GHz WIFI Standalone SAR

Table 12-85

osure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2784M	99.36	0.06	2437.00	6	1.0	14.0	13.99	Right Cheek	0	0.302	1.002	1.006	0.304	0.190		16.9	16.9
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2784M	99.36	0.03	2437.00	6	1.0	14.0	13.99	Right Tilt	0	0.193	1.002	1.006	0.195	0.122		18.8	
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2784M	99.36	0.10	2437.00	6	1.0	14.0	13.99	Left Cheek	0	0.153	1.002	1.006	0.154	0.096		19.8	
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2784M	99.36	0.13	2437.00	6	1.0	14.0	13.99	Left Tilt	0	0.131	1.002	1.006	0.132	0.083		20.5	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-86 Plot A58

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	0.03	2437.00	6	1.0	14.0	13.99	14.0	13.42	Right Cheek	0	0.303	1.143	1.052	0.364	0.228	Plot	16.1	16.1
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	-0.10	2437.00	6	1.0	14.0	13.99	14.0	13.42	Right Tilt	0	0.147	1.143	1.052	0.177	0.111		19.3	
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	0.12	2437.00	6	1.0	14.0	13.99	14.0	13.42	Left Cheek	0	0.170	1.143	1.052	0.204	0.128		18.6	
Head	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	0.03	2437.00	6	1.0	14.0	13.99	14.0	13.42	Left Tilt	0	0.119	1.143	1.052	0.143	0.089		20.2	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram									

Note: To achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

Table 12-87

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn/Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2884M	99.36	0.01	2437.00	6	1.0	14.0	13.99	Back	5	0.310	1.002	1.006	0.312	0.195		16.8	16.8
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2115M	99.36	0.02	2437.00	6	1.0	14.0	13.99	Front	5	0.144	1.002	1.006	0.145	0.091		20.1	
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2110M	99.36	0.09	2437.00	6	1.0	14.0	13.99	Top	10	0.035	1.002	1.006	0.035	0.022		26.3	
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	5	2110M	99.36	0.07	2437.00	6	1.0	14.0	13.99	Left	10	0.023	1.002	1.006	0.023	0.014		28.1	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram									

Table 12-88 Plot A59

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn/Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2884M	95.09	-0.03	2437.00	6	1.0	14.0	13.99	14.0	13.42	Back	5	0.475	1.143	1.052	0.571	0.357	Plot	14.2	14.2
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2115M	95.09	0.01	2437.00	6	1.0	14.0	13.99	14.0	13.42	Front	5	0.289	1.143	1.052	0.348	0.218		16.3	
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	0.07	2437.00	6	1.0	14.0	13.99	14.0	13.42	Top	10	0.044	1.143	1.052	0.053	0.033		24.5	
Hotspot	2.4 GHz WiFi/ IEEE 802.11b	22	DSSS	MIMO	2110M	95.09	0.06	2437.00	6	1.0	14.0	13.99	14.0	13.42	Left	10	0.055	1.143	1.052	0.066	0.041		23.5	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram									

Note: To achieve the 17 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 14 dBm.

12.19 5 GHz WIFI MIMO Standalone SAR

Table 12-89 Plot A60

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.06	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Right Cheek	0	0.137	1.225	1.086	0.182	0.114		16.6	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.02	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Right Cheek	0	0.205	1.153	1.086	0.257	0.161		15.1	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Right Cheek	0	0.179	1.172	1.086	0.228	0.143		15.7	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.08	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Right Cheek	0	0.233	1.250	1.086	0.316	0.198	Plot	14.2	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Right Tilt	0	0.106	1.225	1.086	0.141	0.088		17.7	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.07	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Right Tilt	0	0.178	1.153	1.086	0.223	0.139		15.8	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.01	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Right Tilt	0	0.118	1.172	1.086	0.150	0.094		17.5	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.19	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Right Tilt	0	0.187	1.250	1.086	0.254	0.159		15.2	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.12	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Left Cheek	0	0.062	1.225	1.086	0.082	0.051		20.1	14.2
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.06	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Left Cheek	0	0.100	1.153	1.086	0.125	0.078		18.3	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.09	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Left Cheek	0	0.075	1.172	1.086	0.095	0.059		19.4	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.07	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Left Cheek	0	0.078	1.250	1.086	0.106	0.066		19.0	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Left Tilt	0	0.084	1.225	1.086	0.112	0.070		18.8	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.13	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Left Tilt	0	0.079	1.153	1.086	0.099	0.062		19.1	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Left Tilt	0	0.066	1.172	1.086	0.084	0.053		20.0	
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.10	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Left Tilt	0	0.094	1.250	1.086	0.128	0.080		18.2	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram									

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Table 12-90 Plot A61/A62

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2874M	92.12	0.01	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Back	5	0.532	1.225	1.086	0.708	0.443	Plot	10.7	
Body-worn	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2874M	92.12	-0.08	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Back	5	0.377	1.153	1.086	0.472	0.295		12.5	
Body-worn	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2874M	92.12	0.08	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Back	5	0.243	1.250	1.086	0.330	0.206		14.0	
Body-worn/Hotspot	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2874M	92.12	-0.11	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Back	5	0.280	1.172	1.086	0.356	0.223	Plot	13.7	10.7
Hotspot	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.02	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Front	5	0.046	1.172	1.086	0.059	0.037		21.6	
Hotspot	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.09	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Top	10	0.055	1.172	1.086	0.070	0.044		20.8	
Hotspot	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5775.00	155	U-NII-3	58.5	11.5	10.81	11.5	11.17	Left	10	0.068	1.172	1.086	0.087	0.054		19.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Body 1.6 W/kg (mW/g) averaged over 1 gram									

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Table 12-91 Plot A63

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	U-NII band	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.06	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Back	0	0.330	1.225	1.086	0.439	0.110		18.0	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.04	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Back	0	0.351	1.153	1.086	0.440	0.110		18.0	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.01	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Back	0	0.371	1.250	1.086	0.504	0.126	Plot	17.4	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.01	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Front	0	0.029	1.225	1.086	0.039	0.010		28.6	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.05	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Front	0	0.053	1.153	1.086	0.066	0.017		26.2	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.03	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Front	0	0.056	1.250	1.086	0.076	0.019		25.7	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.15	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Top	0	0.040	1.225	1.086	0.053	0.013		27.2	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.01	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Top	0	0.069	1.153	1.086	0.086	0.022		25.1	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.18	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Top	0	0.049	1.250	1.086	0.067	0.017		26.2	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.07	5290.00	58	U-NII-2A	58.5	11.5	10.62	11.5	10.98	Left	0	0.067	1.225	1.086	0.089	0.022		25.0	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	0.21	5610.00	122	U-NII-2C	58.5	11.5	10.88	11.5	10.96	Left	0	0.078	1.153	1.086	0.098	0.025		24.6	
Phablet	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	2110M	92.12	-0.10	5855.00	171	U-NII-4	58.5	11.5	10.53	11.5	11.48	Left	0	0.070	1.250	1.086	0.095	0.024		24.7	17.4
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Phablet 4.0 W/kg (mW/g) averaged over 10 grams									

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

12.20 6 GHz WIFI MIMO Standalone SAR and APD

Table 12-92 Plot A64

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2784M	99.56	-0.19	6825.00	175	136.1	11.5	11.13	11.5	11.00	Right Cheek	0	0.193	1.122	1.004	0.217	0.136	Plot	15.9	
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2784M	99.56	0.01	6825.00	175	136.1	11.5	11.13	11.5	11.00	Right Tilt	0	0.124	1.122	1.004	0.140	0.088		17.8	15.9
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.21	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left Cheek	0	0.085	1.122	1.004	0.096	0.060		19.4	
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.17	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left Tilt	0	0.079	1.122	1.004	0.089	0.056		19.7	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2784M	99.56	-0.19	6825.00	175	136.1	11.5	11.13	11.5	11.00	Right Cheek	0	1.200	1.122	1.004	1.352	0.068	Plot	21.1	
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2784M	99.56	0.01	6825.00	175	136.1	11.5	11.13	11.5	11.00	Right Tilt	0	0.966	1.122	1.004	1.088	0.054		22.1	21.1
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.21	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left Cheek	0	0.696	1.122	1.004	0.784	0.039		23.5	
Head	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.17	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left Tilt	0	0.657	1.122	1.004	0.740	0.037		23.8	

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Table 12-93 Plot A65

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.03	6025.00	15	136.1	11.5	10.81	11.5	11.07	Back	5	0.356	1.172	1.004	0.419	0.262		13.0	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.02	6345.00	79	136.1	11.5	10.07	11.5	11.43	Back	5	0.308	1.390	1.004	0.430	0.269		12.9	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.07	6505.00	111	136.1	11.5	10.70	11.5	10.97	Back	5	0.395	1.202	1.004	0.477	0.298		12.4	11.7
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Back	5	0.498	1.122	1.004	0.561	0.351	Plot	11.7	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.01	6985.00	207	136.1	11.5	11.18	11.5	10.75	Back	5	0.451	1.189	1.004	0.538	0.336		11.9	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram							

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.03	6025.00	15	136.1	11.5	10.81	11.5	11.07	Back	5	2.260	1.172	1.004	2.659	0.133		18.2	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.02	6345.00	79	136.1	11.5	10.07	11.5	11.43	Back	5	2.000	1.390	1.004	2.791	0.140		18.0	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.07	6505.00	111	136.1	11.5	10.70	11.5	10.97	Back	5	2.400	1.202	1.004	2.896	0.145		17.8	16.9
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Back	5	3.180	1.122	1.004	3.582	0.179	Plot	16.9	
Body-worn	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2115M	99.56	0.01	6985.00	207	136.1	11.5	11.18	11.5	10.75	Back	5	2.720	1.189	1.004	3.247	0.162		17.3	

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Table 12-94 Plot A66

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.04	6025.00	15	136.1	11.5	10.81	11.5	11.07	Back	0	0.237	1.172	1.004	0.279	0.070		18.8	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.08	6345.00	79	136.1	11.5	10.07	11.5	11.43	Back	0	0.238	1.390	1.004	0.332	0.083		18.0	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.02	6505.00	111	136.1	11.5	10.70	11.5	10.97	Back	0	0.349	1.202	1.004	0.421	0.105	Plot	17.0	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Back	0	0.307	1.122	1.004	0.346	0.087		17.8	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.01	6985.00	207	136.1	11.5	11.18	11.5	10.75	Back	0	0.173	1.189	1.004	0.207	0.052		20.1	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Front	0	0.135	1.122	1.004	0.152	0.038		21.4	17.0
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	-0.16	6825.00	175	136.1	11.5	11.13	11.5	11.00	Top	0	0.135	1.122	1.004	0.152	0.038		21.4	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left	0	0.110	1.122	1.004	0.124	0.031		22.3	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Phablet 4.0 W/kg (mW/g) averaged over 10 grams							

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Exposure	Band/ Mode	Bandwidth [MHz]	Service/ Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Max Allowed Power (2nd ant) [dBm]	Conducted Power (2nd ant) [dBm]	Test Position	Spacing [mm]	Measured APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.04	6025.00	15	136.1	11.5	10.81	11.5	11.07	Back	0	5.650	1.172	1.004	6.648	0.332		14.2	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.08	6345.00	79	136.1	11.5	10.07	11.5	11.43	Back	0	5.650	1.390	1.004	7.885	0.394		13.5	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.02	6505.00	111	136.1	11.5	10.70	11.5	10.97	Back	0	8.230	1.202	1.004	9.922	0.497	Plot	12.5	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Back	0	7.160	1.122	1.004	8.066	0.403		13.4	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.01	6985.00	207	136.1	11.5	11.18	11.5	10.75	Back	0	3.900	1.189	1.004	4.656	0.233		15.8	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Front	0	3.020	1.122	1.004	3.402	0.170		17.1	12.5
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2110M	99.56	-0.16	6825.00	175	136.1	11.5	11.13	11.5	11.00	Top	0	2.940	1.122	1.004	3.312	0.166		17.3	
Phablet	6 GHz WIFI/ IEEE 802.11ax	160	OFDM	MIMO	2891M	99.56	0.06	6825.00	175	136.1	11.5	11.13	11.5	11.00	Left	0	2.460	1.122	1.004	2.771	0.139		18.0	

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

12.21 2.4 GHz Bluetooth Standalone SAR

Table 12-143 Plot A67

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]
Head	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	0.03	2402.00	0	1	14.0	13.95	Right Cheek	0	0.145	1.012	1.025	0.150	0.094	Plot	20.2		
Head	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	0.08	2402.00	0	1	14.0	13.95	Right Tilt	0	0.113	1.012	1.025	0.117	0.073		21.3	20.2	12.0
Head	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	0.15	2402.00	0	1	14.0	13.95	Left Cheek	0	0.079	1.012	1.025	0.082	0.051		22.8		
Head	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	-0.07	2402.00	0	1	14.0	13.95	Left Tilt	0	0.079	1.012	1.025	0.082	0.051		22.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram							

Table 12-144

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Head	2.4 GHz Bluetooth	FHSS	7	2884M	77.10	0.06	2402.00	0	1	14.0	14.00	Right Cheek	0	0.069	1.000	1.025	0.071	0.044	
Head	2.4 GHz Bluetooth	FHSS	7	2884M	77.10	0.04	2402.00	0	1	14.0	14.00	Right Tilt	0	0.031	1.000	1.025	0.032	0.020	
Head	2.4 GHz Bluetooth	FHSS	7	2884M	77.10	0.03	2402.00	0	1	14.0	14.00	Left Cheek	0	0.033	1.000	1.025	0.034	0.021	
Head	2.4 GHz Bluetooth	FHSS	7	2884M	77.10	0.05	2402.00	0	1	14.0	14.00	Left Tilt	0	0.008	1.000	1.025	0.008	0.005	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram				

Table 12-145 Plot A68

xposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]
Body-worn/Hotspot	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	-0.08	2480.00	78	1	16.0	15.58	Back	5	0.165	1.102	1.025	0.186	0.116	Plot	20.0	
Hotspot	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	-0.06	2480.00	78	1	16.0	15.58	Front	5	0.085	1.102	1.025	0.096	0.060		22.9	20.0
Hotspot	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	0.06	2480.00	78	1	16.0	15.58	Top	10	0.031	1.102	1.025	0.035	0.022		27.3	
Hotspot	2.4 GHz Bluetooth	FHSS	5	2884M	77.10	0.04	2480.00	78	1	16.0	15.58	Left	10	0.013	1.102	1.025	0.015	0.009		31.0	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 12-146

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Body-worn	2.4 GHz Bluetooth	FHSS	7	2885M	77.10	-0.02	2402.00	0	1	16.0	15.16	Back	10	0.145	1.213	1.025	0.180	0.113	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 12-146 Plot A69

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle [%]	Power Drift [dB]	Frequency [MHz]	Channel #	Data Rate [Mbps]	Max Allowed Power [dBm]	Conducted Power [dBm]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #
Phablet	2.4 GHz Bluetooth	FHSS	7	2115M	77.10	0.08	2402.00	0	1	16.0	15.16	Back	0	0.353	1.213	1.025	0.439	0.110	Plot
Phablet	2.4 GHz Bluetooth	FHSS	7	2115M	77.10	0.01	2402.00	0	1	16.0	15.16	Front	0	0.148	1.213	1.025	0.184	0.046	
Phablet	2.4 GHz Bluetooth	FHSS	7	2115M	77.10	-0.02	2402.00	0	1	16.0	15.16	Left	0	0.243	1.213	1.025	0.302	0.076	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Phablet 4.0 W/kg (mW/g) averaged over 10 grams							

12.22 NFC Standalone SAR

Table 12-150 Plot A70

Exposure	Band / Mode	Signal Type	Ant.	Serial Number	Power Drift [dB]	Frequency [MHz]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #
Phablet	NFC	B	NFC	3719M	0.01	13.60	Back	0	0.018	0.005	Plot
Phablet	NFC	B	NFC	3719M	0.07	13.60	Front	0	0.000	0.000	
Phablet	NFC	B	NFC	3719M	0.07	13.60	Right	0	0.000	0.000	
Phablet	NFC	B	NFC	3719M	0.03	13.60	Left	0	0.000	0.000	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Phablet 4.0 W/kg (mW/g) averaged over 10 grams				

SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D01v06.
2. Batteries are fully charged at the beginning of the SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
6. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 5 mm was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
7. Per FCC KDB Publication 648474 D01v06r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 14 for variability analysis.
9. During SAR Testing for the Wireless Router conditions per FCC KDB Publication 941225 D06v02r01, the actual Portable Hotspot operation (with actual simultaneous transmission of a transmitter with WIFI) was not activated (See Section 7.7 for more details).

10. Per FCC KDB Publication 648474 D01v06r03, this device is considered a "phablet" since the display diagonal dimension is > 150 mm and < 200 mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.
11. Unless otherwise noted, when 10g SAR measurement is considered, a factor of 2.5 is applied to the 1g thresholds for the equivalent test cases.
12. This device uses Qualcomm Smart Transmit for WWAN operations and Qualcomm FastConnect for WLAN operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).
13. Per October 2020 TCB Workshop notes, absorbed power density (APD) using a 4cm2 averaging area is reported based on SAR measurements.
14. The orange highlights throughout the report represent the highest scaled SAR per Equipment Class.

GSM Test Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
3. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

UMTS Notes:

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

LTE Notes:

1. LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 9.5.4.
2. 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.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported 1g SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for LTE B41/48, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.

6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE 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.
7. For LTE Band 48 per FCC guidance, SAR was first measured with only a single carrier active in the uplink (carrier aggregation not active). For each exposure condition, the uplink CA scenario with two component carriers was additionally tested for the configuration with the highest SAR when carrier aggregation was not active. The SCC was configured with the closest available contiguous channel. The two component carriers were configured so the resource blocks are physically allocated side by side to achieve the maximum output power.

NR Notes:

1. NR implementation supports SA and NSA mode. In EN-DC mode, NR operates with the LTE Bands shown in the NR FR1 checklist acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. Due to test setup limitations, SAR testing for NR TDD was performed using test mode software to establish the connection.
3. Simultaneous transmission analysis for EN-DC operations is addressed in the Part 2 Test Report (Serial Number can be found in the bibliography).
4. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
5. Per FCC Guidance, NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
6. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n77 C-Band SAR measured at the highest output power channel in a given a test configuration was > 0.4 W/kg for 1g evaluations and > 1 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
7. Per FCC KDB Publication 447498 D01v06, when the reported NR Band n41/48 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations and > 1.5 W/kg for 10g evaluation, testing at the other channels was required for such test configurations.
8. SRS was tested with CW signal per Qualcomm guidance in 80-w2112-4.
9. For final implementation, NR Band n41, n48 and n77 slot configuration is synchronized using maximum duty cycle of 100%. SAR testing was performed using FTM mode with a 100% duty cycle applied to match final duty cycle.
10. 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).

WLAN Notes:

1. For held-to-ear, hotspot, and phablet operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g evaluations, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n/ax) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 9.6.5 for more information.
3. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 9.6.6 for more information.
4. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values

of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Multi-TX and Antenna SAR Considerations Appendix for complete analysis.

5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.
7. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.
8. Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factor for WIFI 6E. Per October 2020 TCB Workshop notes, 5 channels were tested for WIFI 6E.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 79% transmission duty factor for Bluetooth. See RF Conducted Power Section for the time domain plot and calculation for the duty factor of the device.
2. Head and Hotspot Bluetooth SAR for Bluetooth Antenna 5 were evaluated for BT BDR tethering application.

13 POWER DENSITY DATA SUMMARY

13.1 6 GHz WIFI Power Density Results

Table 13-1 Plot A71

MEASUREMENT RESULTS																									
Frequency (MHz)	Channel	Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift (dB)	Spacing (mm)	Antenna Config.	DUT Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	Grid Step (λ)	iPD (W/m²)	Scaling Factor for Measurement Uncertainty per IEC 62479	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Normal psPD (W/m²)	Scaled Normal psPD (W/m²)	Total psPD (W/m²)	Scaled Total psPD (W/m²)	Plot #
6025.00	15	802.11ax	OFDM	160	11.50	10.81	11.50	11.07	-0.11	2	MIMO	2874M	136.1	Back	99.56	0.125	-	1.554	1.172	1.004	3.100	5.669	3.390	6.199	
6345.00	79	802.11ax	OFDM	160	11.50	10.07	11.50	11.43	0.10	2	MIMO	2874M	136.1	Back	99.56	0.125	-	1.554	1.390	1.004	2.170	4.706	2.490	5.400	
6505.00	111	802.11ax	OFDM	160	11.50	10.70	11.50	10.97	-0.27	2	MIMO	2874M	136.1	Back	99.56	0.125	-	1.554	1.202	1.004	2.470	4.632	3.000	5.626	
6825.00	175	802.11ax	OFDM	160	11.50	11.13	11.50	11.00	-0.09	2	MIMO	2874M	136.1	Back	99.56	0.125	-	1.554	1.122	1.004	2.790	4.884	3.280	5.742	
6985.00	207	802.11ax	OFDM	160	11.50	11.18	11.50	10.75	0.07	2	MIMO	2874M	136.1	Back	99.56	0.125	9.210	1.554	1.189	1.004	3.820	7.086	4.310	7.995	Plot
6985.00	207	802.11ax	OFDM	160	11.50	11.18	11.50	10.75	0.13	8.58	MIMO	2874M	136.1	Back	99.56	0.125	4.420	1.554	1.189	1.004	1.370	2.541	1.490	2.764	
6825.00	175	802.11ax	OFDM	160	11.50	11.13	11.50	11.00	0.14	2	MIMO	2874M	136.1	Front	99.56	0.125	-	1.554	1.122	1.004	2.750	4.814	2.920	5.112	
6825.00	175	802.11ax	OFDM	160	11.50	11.13	11.50	11.00	0.03	2	MIMO	2874M	136.1	Top	99.56	0.125	-	1.554	1.122	1.004	2.490	4.359	2.840	4.972	
6825.00	175	802.11ax	OFDM	160	11.50	11.13	11.50	11.00	-0.05	2	MIMO	2874M	136.1	Left	99.56	0.125	-	1.554	1.122	1.004	2.120	3.711	2.190	3.834	
47 CFR §1.1310 - SAFETY LIMIT Spatial Average Uncontrolled Exposure / General Population																		Power Density 10 W/m² averaged over 4 cm²							

Note: To achieve the 14.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 11.5 dBm.

Power Density General Notes

1. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Batteries are fully charged at the beginning of the measurements. The DUT was connected to a wall charger for some measurements due to the test duration. It was confirmed that the charger plugged into this DUT did not impact the near-field PD test results.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by λ/4.
4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor.
6. Per equipment manufacturer guidance, power density was measured at d=2mm and d=λ/5mm using the same grid size and grid step size for some frequencies and surfaces. The integrated Power Density (iPD) was calculated based on these measurements. Since iPD ratio between the two distances is ≥ -1dB, the grid step was sufficient for determining compliance at d=2mm.
7. psPD for MIMO was evaluated by making a measurement with both antennas transmitting simultaneously.
8. PTP-PR algorithm was used during psPD measurement and calculations.
9. PD results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01.

14 SAR MEASUREMENT VARIABILITY

14.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was 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) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg
5) When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

Table 14-1
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing [mm]	Antenna Config	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
750	793.00	23330	LTE Band 14, 10 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	Back	5	1	0.836	0.805	1.04	N/A	N/A	N/A	N/A
835	846.60	4233	UMTS 850	RMC	Back	5	1	0.807	0.739	1.09	N/A	N/A	N/A	N/A
1750	1702.50	340500	NR Band 70, 15 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	Back	5	2	0.825	0.780	1.06	N/A	N/A	N/A	N/A
3500	3570.00	638000	NR Band 48, 40 MHz Bandwidth	CW/SRS	Back	5	2	0.815	0.757	1.08	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					Body 1.6 W/kg (mW/g) averaged over 1 gram									

14.2 Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g and <3.75 W/kg for 10g for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

15 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	3/25/2024	Annual	3/25/2025	MY47270002
Agilent	E4438C	ESG Vector Signal Generator	11/15/2024	Annual	11/15/2025	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	3/15/2024	Annual	3/15/2025	MY47420651
Agilent	N5182A	MXG Vector Signal Generator	3/7/2024	Annual	3/7/2025	MY47420603
Agilent	N9020A	MXG Vector Signal Generator	7/8/2024	Annual	7/8/2025	MY48010233
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/25/2024	Annual	9/25/2025	MY40003841
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/25/2024	Annual	9/25/2025	US39170118
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB46310798
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	US41140256
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	433973
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Amplifier Research	1S1G6M3	Amplifier	7/10/2024	Annual	7/10/2025	390882
Anritsu	ML2496A	Power Meter	6/24/2024	Annual	6/24/2025	1840005
Anritsu	ML2495A	Power Meter	7/8/2024	Annual	7/8/2025	1039008
Anritsu	MA2411B	Pulse Power Sensor	7/10/2024	Annual	7/10/2025	1126066
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
Anritsu	MA2440BA	Microwace Peak Power Sensor	4/8/2024	Annual	4/8/2025	11679
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	4/26/2024	Annual	4/26/2025	6201381794
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	5/15/2024	Annual	5/15/2025	6262150047
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	5/30/2024	Annual	5/30/2025	6262044715
Anritsu	MT8000A	Radio Communication Test Station	5/14/2024	N/A	5/14/2025	6272337419
Anritsu	MT8000A	Radio Communication Test Station	4/10/2024	Annual	4/10/2025	6261987983
Anritsu	MT8000A	Radio Communication Test Station	5/2/2024	Annual	5/2/2025	6272337436
Anritsu	MA24106A	USB Power Sensor	6/7/2024	Annual	6/7/2025	1827529
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Anritsu	MA24106A	USB Power Sensor	7/9/2024	Annual	7/9/2025	1244512
Mini-Circuits	PWR-4GHS	USB Power Sensor	6/12/2024	Annual	6/12/2025	12001070013
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240174346
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171096
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171059
Control Company	4353	Ultra Long Stem Thermometer	10/10/2024	Annual	10/10/2025	200645916
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310280
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	566279	Therm./ Clock/ Humidity Monitor	2/16/2024	Biennial	2/16/2026	240140051
Testo	608-H1	ALARM-HYGROMETER	4/11/2024	Annual	4/11/2025	83316971
Testo	608-H1	ALARM-HYGROMETER	4/11/2024	Annual	4/11/2025	83316952
Testo	608-H1	ALARM-HYGROMETER	4/11/2024	Annual	4/11/2025	83316953
Mitutoyo	500-196-30	CD-6"ASX 6Inch Digital Caliper	2/16/2022	Triennial	2/16/2025	A20238413
Keysight Technologies	N9020A	MXA Signal Analyzer	4/11/2024	Annual	4/11/2025	MY54500644
Agilent	N9020A	MXA Signal Analyzer	6/14/2024	Annual	6/14/2025	MY54470202
Keysight Technologies	N9020A	MXA Signal Analyzer	7/8/2024	Annual	7/8/2025	MY48010233
MCL	BW-N10W5+	Attenuator	7/9/2024	Annual	7/9/2025	1507
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	7/10/2024	Annual	7/10/2025	31634
Mini-Circuits	BW-N2DW5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	7/10/2024	Annual	7/10/2025	UU13301538
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	7/10/2024	Annual	7/10/2025	UU19201507
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	7/9/2024	Annual	7/9/2025	2111
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
MCL	BW-N3W5+	Attenuator	7/9/2024	Annual	7/9/2025	1608
Seekonk	NC-100	Torque Wrench	CBT	N/A	CBT	22217
Seekonk	NC-100	Torque Wrench	4/2/2024	Biennial	4/2/2026	1262
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	7/8/2024	Annual	7/8/2025	166818
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/11/2024	Annual	6/11/2025	166869
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	4/29/2024	Annual	4/29/2025	140147
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/14/2024	Annual	5/14/2025	1070
SPEAG	DAK5-3.5	Portable Dielectric Assessment Kit	8/7/2024	Annual	8/7/2025	1041
SPEAG	DAK5-3.5	Portable Dielectric Assessment Kit	7/8/2024	Annual	7/8/2025	1039
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1331
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1390
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/11/2024	Annual	3/11/2025	1102
SPEAG	CLA-13	Confined Loop Antenna	9/4/2024	Annual	9/4/2025	1002
SPEAG	D750V3	750 MHz SAR Dipole	2/7/2024	Annual	2/7/2025	1046
SPEAG	D750V3	750 MHz SAR Dipole	5/10/2024	Annual	5/10/2025	1003
SPEAG	D835V2	835 MHz SAR Dipole	4/8/2024	Annual	4/8/2025	4d119
SPEAG	D1750V2	1750 MHz SAR Dipole	11/7/2024	Annual	11/7/2025	1150
SPEAG	D1750V2	1750 MHz SAR Dipole	4/15/2024	Annual	4/15/2025	1051
SPEAG	D1900V2	1900 MHz SAR Dipole	7/10/2024	Annual	7/10/2025	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2022	Triennial	2/21/2025	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	4/12/2024	Annual	4/12/2025	5d141
SPEAG	D2300V2	2300 MHz SAR Dipole	8/25/2022	Triennial	8/25/2025	1073
SPEAG	D2300V2	2300 MHz SAR Dipole	6/14/2024	Annual	6/14/2025	1116
SPEAG	D2450V2	2450 MHz SAR Dipole	8/7/2024	Annual	8/7/2025	719
SPEAG	D2600V2	2600 MHz SAR Dipole	11/15/2022	Biennial	11/15/2025	1071
SPEAG	D3500V2	3500 MHz SAR Dipole	12/11/2024	Annual	12/11/2025	1068
SPEAG	D3500V2	3500 MHz SAR Dipole	6/10/2024	Annual	6/10/2025	1127
SPEAG	D3500V2	3500 MHz SAR Dipole	1/12/2024	Biennial	1/12/2026	1059
SPEAG	D3700V2	3700 MHz SAR Dipole	12/11/2024	Annual	12/11/2025	1029
SPEAG	D3700V2	3700 MHz SAR Dipole	6/10/2024	Annual	6/10/2025	1096
SPEAG	D3700V2	3700 MHz SAR Dipole	1/9/2024	Biennial	1/9/2026	1018
SPEAG	D3900V2	3900 MHz SAR Dipole	6/10/2024	Annual	6/10/2025	1074
SPEAG	D5GHzV2	5 GHz SAR Dipole	2/21/2024	Annual	2/21/2025	1057
SPEAG	D6.5GHzV2	6.5 GHz SAR Dipole	12/6/2024	Annual	12/6/2025	1018
SPEAG	D6.5GHzV2	6.5 GHz SAR Dipole	2/22/2024	Annual	2/22/2025	1111
SPEAG	5G Verification Source 10GHz	10GHz System Verification Antenna	3/5/2024	Annual	3/5/2025	1002
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/4/2024	Annual	12/4/2025	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/9/2024	Annual	12/9/2025	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2024	Annual	5/8/2025	1502
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/10/2024	Annual	9/10/2025	1364
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/8/2024	Annual	7/8/2025	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2024	Annual	5/8/2025	1678
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2025	Annual	1/13/2026	859
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2024	Annual	5/8/2025	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/8/2024	Annual	8/8/2025	1532
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/11/2024	Annual	6/11/2025	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/12/2024	Annual	3/12/2025	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/10/2024	Annual	9/10/2025	1449
SPEAG	EX3DV4	SAR Probe	12/9/2024	Annual	12/9/2025	7551
SPEAG	EX3DV4	SAR Probe	12/16/2024	Annual	12/16/2025	7547
SPEAG	EX3DV4	SAR Probe	5/10/2024	Annual	5/10/2025	7402
SPEAG	EX3DV4	SAR Probe	9/11/2024	Annual	9/11/2025	7558
SPEAG	EX3DV4	SAR Probe	6/28/2024	Annual	6/28/2025	7803
SPEAG	EX3DV4	SAR Probe	5/8/2024	Annual	5/8/2025	7660
SPEAG	EX3DV4	SAR Probe	1/8/2025	Annual	1/8/2026	7571
SPEAG	EX3DV4	SAR Probe	5/10/2024	Annual	5/10/2025	3914
SPEAG	EX3DV4	SAR Probe	11/6/2024	Annual	11/6/2025	7491
SPEAG	EX3DV4	SAR Probe	6/17/2024	Annual	6/17/2025	7409
SPEAG	EX3DV4	SAR Probe	3/8/2024	Annual	3/8/2025	7527
SPEAG	EUmmWV4	EUmmWV4 Probe	1/8/2025	Annual	1/8/2026	9389

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.
Note: All equipment was used solely within its respective calibration period.

16 MEASUREMENT UNCERTAINTIES

"Note: The tables below represent the worst-case uncertainty budget among the uncertainty budgets of all testing laboratories listed in Section 1.2 "

Applicable for SAR measurements < 6GHz:

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.73	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.73	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.73	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.73	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.73	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				12.2	12.0	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				24.4	24.0	

The above measurement uncertainties are according to IEEE Std. 1528-2013

Applicable for SAR measurements > 6GHz:

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E.2.1	9.3	N	1	1	1	9.3	9.3	∞
Axial Isotropy	E.2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E.2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E.2.3	2	R	1.73	1	1	1.2	1.2	∞
Linearity	E.2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E.2.4	0.25	R	1.73	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.73	1	1	2.8	2.8	∞
Readout Electronics	E.2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	R	1.73	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.73	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.73	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.73	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.73	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E.4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E.2.9	5	R	1.73	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.73	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E.3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E.3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E.3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E.3.4	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E.3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				13.8	13.6	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				27.6	27.1	

The above measurement uncertainties are according to IEEE Std. 1528-2013

Applicable for Power Density Measurements:

a	b	c	d	e	f = c x f/e	g
Uncertainty Component	Unc. (± dB)	Prob. Dist.	Div.	c_i	u_i (± dB)	v_i
Measurement System						
Calibration	0.49	N	1	1	0.49	∞
Probe Correction	0.00	R	1.73	1	0.00	∞
Frequency Response	0.20	R	1.73	1	0.12	∞
Sensor Cross Coupling	0.00	R	1.73	1	0.00	∞
Isotropy	0.50	R	1.73	1	0.29	∞
Linearity	0.20	R	1.73	1	0.12	∞
Probe Scattering	0.00	R	1.73	1	0.00	∞
Probe Positioning offset	0.30	R	1.73	1	0.17	∞
Probe Positioning Repeatability	0.04	R	1.73	1	0.02	∞
Sensor MechanicalOffset	0.00	R	1.73	1	0.00	∞
Probe Spatial Resolution	0.00	R	1.73	1	0.00	∞
Field Impedence Dependance	0.00	R	1.73	1	0.00	∞
Amplitude and Phase Drift	0.00	R	1.73	1	0.00	∞
Amplitude and Phase Noise	0.04	R	1.73	1	0.02	∞
Measurement Area Truncation	0.00	R	1.73	1	0.00	∞
Data Acquisition	0.03	N	1	1	0.03	∞
Sampling	0.00	R	1.73	1	0.00	∞
Field Reconstruction	2.00	R	1.73	1	1.15	∞
Forward Transformation	0.00	R	1.73	1	0.00	∞
Power Density Scaling	0.00	R	1.73	1	0.00	∞
Spatial Averaging	0.10	R	1.73	1	0.06	∞
System Detection Limit	0.04	R	1.73	1	0.02	∞
Test Sample Related						
Probe Coupling with DUT	0.00	R	1.73	1	0.00	∞
Modulation Response	0.40	R	1.73	1	0.23	∞
Integration Time	0.00	R	1.73	1	0.00	∞
Response Time	0.00	R	1.73	1	0.00	∞
Device Holder Influence	0.10	R	1.73	1	0.06	∞
DUT alignment	0.00	R	1.73	1	0.00	∞
RF Ambient Conditions	0.04	R	1.73	1	0.02	∞
Ambient Reflections	0.04	R	1.73	1	0.02	∞
Immunity/Secondary Reception	0.00	R	1.73	1	0.00	∞
Drift of DUT	0.21	R	1.73	1	0.12	∞
Combined Standard Uncertainty (k=1)		RSS			1.34	∞
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2			2.68	

17 CONCLUSION

17.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF 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. [3]

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