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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:
09/04/2024 - 10/30/2024
Test Site/Locations:
Element, Columbia, MD, USA
Element Morgan Hill, CA, USA
Element, Suwon, Korea
Document Serial No.:
1M2408260066-01.A3L (Rev 1)

FCC ID:	**A3LSMS936B**
APPLICANT:	**SAMSUNG ELECTRONICS CO., LTD.**

DUT Type:	Portable Handset
Application Type:	Certification
FCC Rule Part(s):	CFR §2.1093
Model(s):	SM-S936B/DS
Additional model(s):	SM-S936B

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	0.66	0.49	0.56	N/A
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	<0.1	0.33	0.56	N/A
PCE	UMTS 850	826.40 - 846.60 MHz	0.81	0.76	0.76	N/A
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.21	0.70	1.18	N/A
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.23	0.46	**1.19**	N/A
PCE	LTE Band 12	699.7 - 715.3 MHz	0.87	0.56	0.57	N/A
PCE	LTE Band 17	706.5 - 713.5 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	1.18	0.76	0.76	N/A
PCE	LTE Band 26	814.7 - 848.3 MHz	1.18	**0.83**	0.83	N/A
PCE	LTE Band 5	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 66	1710.7 - 1779.3 MHz	**1.20**	0.48	0.74	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	1.06	0.37	0.74	N/A
PCE	LTE Band 2	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	0.70	0.50	0.42	N/A
PCE	NR Band n5	826.5 - 846.5 MHz	1.12	0.40	0.52	N/A
PCE	NR Band n66	1712.5 - 1777.5 MHz	1.04	0.45	0.93	N/A
PCE	NR Band n25	1852.5 - 1912.5 MHz	0.92	0.38	0.95	N/A
PCE	NR Band n2	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A
PCE	NR Band n41	2501.01 - 2685 MHz	0.97	0.20	0.35	N/A
PCE	NR Band n77	3455.01 - 3544.98 MHz; 3705 - 3975 MHz	1.17	0.24	0.30	N/A
DTS	2.4 GHz WiFi	2412 - 2472 MHz	**0.51**	**0.31**	**0.52**	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	**0.60**	**0.53**	**0.52**	**2.43**
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	**0.14**	**0.13**	N/A	**0.51**
DSS	2.4 GHz Bluetooth	2402 - 2480 MHz	**0.36**	**0.28**	**0.38**	N/A
DXX	NFC	13.56 MHz	N/A	N/A	N/A	<0.1
UWB	UWB	6489.6 - 7987.2 MHz	N/A	N/A	N/A	<0.1
Simultaneous SAR per KDB 690783 D01v01r03:			**1.69**	1.58	**1.69**	**2.96**

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	0.87	0.96	12.66	5.41
UWB	UWB	6489.6 - 7987.2 MHz	N/A	N/A	0.09	0.72

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 2.9 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

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 +1.410.381.1520
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, H, L, P, R, S

1.2.2 Testing Laboratory 2

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY SAN JOSE, CA
Test Lab Location	18855 Adams Ct, Morgan Hill, CA 95037 USA United States Tel. +1.408.538.5600 / Fax +1.410.290.6654
Accreditation Info.	Lab Code. (ISED): 22831
	CAB Identifier (NIST): US0211
	ISO/IEC 17025 (A2LA): CERT #2041.02
	ilac-MRA A2LA ACCREDITED CERT #2041.02
Measurement System No.	AM2, AM4, AM7, AM11, AM13, AM16

1.2.3 Testing Laboratory 3

Test Firm Name	ELEMENT MATERIALS TECHNOLOGY SUWON, LTD.
Test Lab Location	(Tower-dong#P136) 13, Heungdeok 1-ro, Giheung-gu, 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 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 17	Voice/Data	706.5 - 713.5 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 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 41	Voice/Data	2498.5 - 2687.5 MHz
NR Band n5	Voice/Data	826.5 - 846.5 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 n41	Voice/Data	2501.01 - 2685 MHz
NR Band n77	Voice/Data	3455.01 - 3544.98 MHz; 3705 - 3975 MHz
2.4 GHz WIFI	Voice/Data	2412 - 2472 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
UWB	Data	6489.6 - 7987.2 MHz

2.2 Data Referencing

Reference Device		Variant Device	Key differences
FCC ID: A3LSMS936U		FCC ID: A3LSMS936B	See change documentation
Equipment class	Mode	Data Referencing	Comments
DTS	2.4 GHz WIFI	Y	See SAR Report Section 12-17, 12-18
NII	5 GHz WIFI	Y	See SAR Report Section 12-19, 12-20
6CD	6 GHz WIFI	Y	See SAR Report Section 12-21, 12-22
DSS	2.4 GHZ BT	Y	See SAR Report Section 12-23, 12-24

Per manufacturer declaration, there are two Portable Handset devices FCC ID: A3LSMS936U and FCC ID: A3LSMS936B, with high degree of similarity, reference model FCC ID: A3LSMS936U and variant model FCC ID: A3LSMS936B. Both models share the same material, form factor, circuit design, and components, including antennas and their locations. The reference and variant models use the same material, form factor, circuit design, and components, including antennas and their locations. The reference and variant models use the same power tables and have same tune-up tolerances.

Per FCC Approved Data Referencing Test Plan, testing was done fully on the reference model FCC ID: A3LSMS936U, while spot-check verification has been performed on variant model FCC ID: A3LSMS936B. The spot check verification has been performed in the worst case for each exposure/each antenna condition and if the spot check SAR value was higher, it was applied to the simultaneous transmission results and SAR CHAR on variant model FCC ID: A3LSMS936B.The reference and variant model comparison data summary is included in section 12(12-17 to 12-21). Please see RF exposure technical reports in Appendix K: for complete compliance evaluation for the reference model.

2.3 Time-Averaged Algorithm

This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature with antenna grouping. 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 feature (report SN could be found in Section 2.11– Bibliography).

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., P_{limit} for WWAN sub-6/WLAN/BT radio), for each characterized technology and band. Characterization is achieved by determining P_{limit} for WWAN sub-6/WLAN/BT that corresponds to the exposure design targets after accounting for all device design related uncertainties, i.e., SAR_design_target (<FCC SAR Limit) for sub-6 radio. The SAR characterization is denoted as SAR char in this report (see SAR Summary Section and Part 0 SAR Test Results for P_{limit} Calculations Appendix).

Smart Transmit allows the device to transmit at higher power instantaneously, as high as P_{max}, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit}. Below table shows P_{limit} EFS settings and maximum tune up output power P_{max} configured for this EUT for various transmit conditions (Device State Index DSI). Note that the device uncertainty for WWAN sub-6/WLAN/BT is 1.0dB for this EUT.

The maximum time-averaged output power (dBm) for any WWAN sub-6/WLAN/BT technology, band, and DSI is the 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				10mm, 0mm	0mm
Configuration					
DSI				0	1
Technology/Band	Antenna	Antenna Group	P_{max}	P_{limit}	P_{limit}
GSM 850	A	AG0	24.1	27.4	32.2
GSM 850	E	AG1	24.1	27.6	20.5
GSM 1900	A	AG0	21.6	20.0	32.0
UMTS 850	A	AG0	24.5	28.0	32.5
UMTS 850	E	AG1	24.5	26.6	21.0
UMTS 1750	A	AG0	23.5	20.0	30.5
UMTS 1900	A	AG0	23.5	19.0	30.9
LTE Band 12/17	A	AG0	24.0	27.4	32.7
LTE Band 12/17	E	AG1	24.0	26.5	21.0
LTE Band 13	A	AG0	24.0	28.4	32.1
LTE Band 13	E	AG1	24.0	25.9	21.0
LTE Band 26/5	A	AG0	24.0	26.2	32.2
LTE Band 26/5	E	AG1	24.0	25.8	21.0
LTE Band 66/4	A	AG0	23.0	18.5	30.7
LTE Band 66/4	F	AG1	23.0	20.0	18.0
LTE Band 25/2	A	AG0	23.0	18.0	30.8
LTE Band 25/2	F	AG1	23.0	20.0	18.0
LTE Band 41 PC3	B	AG0	22.0	19.5	34.7
LTE Band 41 PC3	F	AG1	22.0	19.0	14.5
LTE Band 41 PC2	B	AG0	21.5	19.5	34.7
LTE Band 41 PC2	F	AG1	21.5	19.0	14.5
NR Band n5	A	AG0	24.0	23.0	23.0
NR Band n5	E	AG1	24.0	23.0	21.0
NR Band n66	A	AG0	23.5	18.5	23.0
NR Band n66	F	AG1	24.0	20.0	18.0
NR Band n25/n2	A	AG0	23.5	18.0	30.2
NR Band n25/n2	F	AG1	23.0	20.0	18.0
NR Band n41 PC3 (Path 1)	F	AG1	24.0	18.0	17.5
NR Band n41 PC3 (Path 1)	B	AG0	23.0	14.0	13.5
NR Band n41 PC3 (Path 1)	E	AG1	22.5	13.5	13.0
NR Band n41 PC3 (Path 1)	D	AG0	20.0	13.0	12.5
NR Band n41 PC3 (Path 2)	B	AG0	24.0	14.0	13.5
NR Band n41 PC3 (Path 2)	F	AG1	21.0	18.0	17.5
NR Band n41 PC3 (Path 2)	D	AG0	19.0	13.0	12.5
NR Band n41 PC3 (Path 2)	E	AG1	21.0	13.5	13.0
NR Band n77 PC2	F	AG1	25.5	17.0	16.0
NR Band n77 PC2	C	AG0	19.0	12.0	11.0
NR Band n77 PC2	I	AG1	23.5	15.5	14.5
NR Band n77 PC2	D	AG0	18.0	11.5	10.5
2.4 GHz WIFI	H	AG1	19.0	20.1	13.0
2.4 GHz WIFI	J	AG1	19.0	25.1	13.0
2.4 GHz WIFI	MIMO	AG1	19.0	19.6	13.0
5 GHz WIFI	H	AG1	17.0	16.0	13.0
5 GHz WIFI	E	AG1	17.0	16.0	13.0
5 GHz WIFI	MIMO	AG1	17.0	16.0	13.0
6 GHz WIFI	H	AG1	16.0	10.5	9.0
6 GHz WIFI	E	AG1	16.0	10.5	9.0
6 GHz WIFI	MIMO	AG1	16.0	10.5	9.0
2.4 GHz Bluetooth	H	AG1	17.4	20.2	10.9
2.4 GHz Bluetooth	J	AG1	17.4	26.9	10.9
2.4 GHz Bluetooth	MIMO	AG1	10.9	19.3	17.7

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/be RU operations can be found in 802.11ax/be RU SAR Exclusion Appendix.

2.4.1 Licensed Output Power

GSM/GPRS/EDGE 850										
Antenna A										
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	33.5	33.5	31.0	29.5	28.0	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	30.0	28.5	27.0	27.0	25.0	23.0	22.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	33.5	33.5	31.0	29.5	28.0	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	30.0	28.5	27.0	27.0	25.0	23.0	22.0
DSI = 1 (Head)	Max Allowed Power	33.5	33.5	31.0	29.5	28.0	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	30.0	28.5	27.0	27.0	25.0	23.0	22.0
GSM/GPRS/EDGE 850										
Antenna E										
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	33.5	33.5	31.0	29.5	28.0	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	30.0	28.5	27.0	27.0	25.0	23.0	22.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	33.5	33.5	31.0	29.5	28.0	28.0	26.0	24.0	23.0
	Nominal	32.5	32.5	30.0	28.5	27.0	27.0	25.0	23.0	22.0
DSI = 1 (Head)	Max Allowed Power	30.7	30.7	27.7	25.9	24.7	28.0	26.0	24.0	23.0
	Nominal	29.7	29.7	26.7	24.9	23.7	27.0	25.0	23.0	22.0
GSM/GPRS/EDGE 1900										
Antenna A										
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	27.0	25.0	23.0	22.0
	Nominal	30.0	30.0	27.5	26.0	24.0	26.0	24.0	22.0	21.0
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	30.2	30.2	27.2	25.4	24.2	27.0	25.0	23.0	22.0
	Nominal	29.2	29.2	26.2	24.4	23.2	26.0	24.0	22.0	21.0
DSI = 1 (Head)	Max Allowed Power	31.0	31.0	28.5	27.0	25.0	27.0	25.0	23.0	22.0
	Nominal	30.0	30.0	27.5	26.0	24.0	26.0	24.0	22.0	21.0

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

UMTS Band 5 (850 MHz)					
Antenna A					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 1 (Head)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
UMTS Band 5 (850 MHz)					
Antenna E					
Power Level		Modulated Average Output Power (in dBm)			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 0 (Body-Worn, Hotspot, or Phablet)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 1 (Head)	Max Allowed Power	22.0	21.0	21.0	21.0
	Nominal	21.0	20.0	20.0	20.0
UMTS Band 4 (1750 MHz)					
Antenna A					
Power Level		Modulated Average Output Power (in dBm)			
		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, Hotspot, or Phablet)	Max Allowed Power	21.0	20.0	20.0	20.0
	Nominal	20.0	19.0	19.0	19.0
DSI = 1 (Head)	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
UMTS Band 2 (1900 MHz)					
Antenna A					
Power Level		Modulated Average Output Power (in dBm)			
		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, Hotspot, or Phablet)	Max Allowed Power	20.0	19.0	19.0	19.0
	Nominal	19.0	18.0	18.0	18.0
DSI = 1 (Head)	Max Allowed Power	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5

Mode / Band	Antenna		Modulated Average Output Power (in dBm)		
			Pmax	DSI = 0 (Body-Worn, Hotspot, or Phablet)	DSI = 1 (Head)
LTE Band 12/17	A	Max Allowed Power	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0
LTE Band 12/17	E	Max Allowed Power	25.0	25.0	22.0
		Nominal	24.0	24.0	21.0
LTE Band 13	A	Max Allowed Power	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0
LTE Band 13	E	Max Allowed Power	25.0	25.0	22.0
		Nominal	24.0	24.0	21.0
LTE Band 26/5	A	Max Allowed Power	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0
LTE Band 26/5	E	Max Allowed Power	25.0	25.0	22.0
		Nominal	24.0	24.0	21.0
LTE Band 66/4	A	Max Allowed Power	24.0	19.5	24.0
		Nominal	23.0	18.5	23.0
LTE Band 66/4	F	Max Allowed Power	24.0	21.0	19.0
		Nominal	23.0	20.0	18.0
LTE Band 25/2	A	Max Allowed Power	24.0	19.0	24.0
		Nominal	23.0	18.0	23.0
LTE Band 25/2	F	Max Allowed Power	24.0	21.0	19.0
		Nominal	23.0	20.0	18.0
LTE Band 41 PC3	B	Max Allowed Power	25.0	22.5	25.0
		Nominal	24.0	21.5	24.0
LTE Band 41 PC3	F	Max Allowed Power	25.0	22.0	17.5
		Nominal	24.0	21.0	16.5
LTE Band 41 PC2	B	Max Allowed Power	26.1	24.1	26.1
		Nominal	25.1	23.1	25.1
LTE Band 41 PC2	F	Max Allowed Power	26.1	23.6	19.1
		Nominal	25.1	22.6	18.1

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, Hotspot, or Phablet)	DSI = 1 (Head)
NR Band n5	A	Max Allowed Power	25.0	24.0	24.0
		Nominal	24.0	23.0	23.0
NR Band n5	E	Max Allowed Power	25.0	24.0	22.0
		Nominal	24.0	23.0	21.0
NR Band n66	A	Max Allowed Power	24.5	19.5	24.0
		Nominal	23.5	18.5	23.0
NR Band n66	F	Max Allowed Power	25.0	21.0	19.0
		Nominal	24.0	20.0	18.0
NR Band n25/n2	A	Max Allowed Power	24.5	19.0	24.5
		Nominal	23.5	18.0	23.5
NR Band n25/n2	F	Max Allowed Power	24.0	21.0	19.0
		Nominal	23.0	20.0	18.0
NR Band n41 PC3 (Path 1)	F	Max Allowed Power	25.0	19.0	18.5
		Nominal	24.0	18.0	17.5
NR Band n41 PC3 (Path 1)	B	Max Allowed Power	24.0	15.0	14.5
		Nominal	23.0	14.0	13.5
NR Band n41 PC3 (Path 1)	E	Max Allowed Power	23.5	14.5	14.0
		Nominal	22.5	13.5	13.0
NR Band n41 PC3 (Path 1)	D	Max Allowed Power	21.0	14.0	13.5
		Nominal	20.0	13.0	12.5
NR Band n41 PC3 (Path 2)	B	Max Allowed Power	25.0	15.0	14.5
		Nominal	24.0	14.0	13.5
NR Band n41 PC3 (Path 2)	F	Max Allowed Power	22.0	19.0	18.5
		Nominal	21.0	18.0	17.5
NR Band n41 PC3 (Path 2)	E	Max Allowed Power	22.0	14.5	14.0
		Nominal	21.0	13.5	13.0
NR Band n41 PC3 (Path 2)	D	Max Allowed Power	20.0	14.0	13.5
		Nominal	19.0	13.0	12.5
NR Band n77 PC2	F	Max Allowed Power	26.5	18.0	17.0
		Nominal	25.5	17.0	16.0
NR Band n77 PC2	C	Max Allowed Power	20.0	13.0	12.0
		Nominal	19.0	12.0	11.0
NR Band n77 PC2	I	Max Allowed Power	24.5	16.5	15.5
		Nominal	23.5	15.5	14.5
NR Band n77 PC2	D	Max Allowed Power	19.0	12.5	11.5
		Nominal	18.0	11.5	10.5

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

Mode	Band	Power Level	IEEE 802.11 Modulated Output Power (in dBm)																													
			SISO Antenna H										SISO Antenna J										SISO in MIMO MIMO									
			a		n		ac		ax (5G)		be (5G)		a		n		ac		ax (5G)		be (5G)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (5G) (CDD + STBC, SDM)		be (5G) (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.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
Pmax	2.4 GHz WLAN	2.4G Ghz	20.0 ch. 12 ch. 13	19.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	16.0 ch. 12 ch. 13	15.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	20.0 ch. 12 ch. 13	19.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	16.0 ch. 12 ch. 13	15.0 8.0 5.0 4.0	16.0 ch. 12 ch. 13	15.0 8.0 5.0 4.0	20.0 ch. 12 ch. 13	19.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	18.0 ch. 12 ch. 13	17.0 8.0 5.0 4.0	16.0 ch. 12 ch. 13	15.0 8.0 5.0 4.0	16.0 ch. 12 ch. 13	15.0 8.0 5.0 4.0

The below table is applicable in the following conditions:

- DSI=1 (RCV)

Mode	Band	Power Level	IEEE 802.11 Modulated Output Power (in dBm)																													
			SISO Antenna H										SISO Antenna J										SISO in MIMO MIMO									
			a		n		ac		ax (5G)		be (5G)		a		n		ac		ax (5G)		be (5G)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (5G) (CDD + STBC, SDM)		be (5G) (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.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
DSI = 1 (Head)	2.4 GHz WLAN	2.4G Ghz	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0	14.0 ch. 12 ch. 13	13.0 8.0 5.0 4.0

2.4.3 5 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																													
			SISO Antenna H										SISO Antenna E										SISO in MIMO MIMO									
			a		n		ac		ax (5G)		be (5G)		a		n		ac		ax (5G)		be (5G)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (5G) (CDD + STBC, SDM)		be (5G) (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.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
Pmax	5 GHz WIFI (20MHz BW)	UNII-1	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	16.0	15.0	16.0	15.0	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	16.0	15.0	16.0	15.0	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	18.0 ch. 36 17.0	17.0 16.0	16.0	15.0	16.0	15.0
		UNII-2A	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0
		UNII-2C	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0
		UNII-3	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0
		UNII-4	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0	18.0	17.0	18.0	17.0	18.0	17.0	16.0	15.0	16.0	15.0
	5 GHz WIFI (40MHz BW)	UNII-1			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0
		UNII-2A			16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.0	15.0 13.0	16.0 ch. 62 14.0	15.0 13.0			16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.0	15.0 13.0	16.0 ch. 62 14.0	15.0 13.0			16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.5	15.0 13.5	16.0 ch. 62 14.0	15.0 13.0	16.0 ch. 62 14.0	15.0 13.0
		UNII-2C			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5
		UNII-3			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
		UNII-4			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
	5 GHz WIFI (80MHz BW)	UNII-1					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5
		UNII-2A					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5
		UNII-2C					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0
		UNII-3					15.0	14.0	15.0	14.0	15.0	14.0					15.0	14.0	15.0	14.0	15.0	14.0					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					15.0	14.0	15.0	14.0	15.0	14.0					15.0	14.0	15.0	14.0	15.0	14.0
	5 GHz WIFI (160MHz BW)	UNII-1/2A					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
		UNII-2C					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
		UNII-3/4					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

The below table is applicable in the following conditions:

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

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																													
			SISO Antenna H										SISO Antenna E										SISO in MIMO MIMO									
			a		n		ac		ax (5G)		be (5G)		a		n		ac		ax (5G)		be (5G)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (5G) (CDD + STBC, SDM)		be (5G) (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.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
0_Body-Worn, Hotspot, or Phablet	5 GHz WIFI (20MHz BW)	UNII-1	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0
		UNII-2A	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0
		UNII-2C	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0
		UNII-3	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0
		UNII-4	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0	17.0	16.0	17.0	16.0	17.0	16.0	16.0	15.0	16.0	15.0
	5 GHz WIFI (40MHz BW)	UNII-1			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0			16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.5	15.0 13.5	16.0 ch. 38 14.0	15.0 13.0	16.0 ch. 38 14.0	15.0 13.0
		UNII-2A			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
		UNII-2C			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5			16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5	16.0 ch. 102 14.5	15.0 13.5
		UNII-3			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
		UNII-4			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0			16.0	15.0	16.0	15.0	16.0	15.0	16.0	15.0
	5 GHz WIFI (80MHz BW)	UNII-1					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5
		UNII-2A					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5
		UNII-2C					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0					15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0	15.0 ch. 106 12.0	14.0 11.0
		UNII-3					15.0	14.0	15.0	14.0	15.0	14.0					15.0	14.0	15.0	14.0	15.0	14.0					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					15.0	14.0	15.0	14.0	15.0	14.0					15.0	14.0	15.0	14.0	15.0	14.0
	5 GHz WIFI (160MHz BW)	UNII-1/2A					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
		UNII-2C					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
		UNII-3/4					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

The below table is applicable in the following conditions:

- DSI=1 (RCV)

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																											
			SISO Antenna H										SISO Antenna E										SISO in MIMO MIMO									
			a		n		ac		ax (SU)		be (SU)		a		n		ac		ax (SU)		be (SU)		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)		be (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.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.	Max	Nom.
1_Head	5 GHz WIFI (20MHz BW)	UNII-1	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	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
		UNII-2A	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	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
		UNII-2C	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	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
		UNII-3	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	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
		UNII-4	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	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0	14.0	13.0
	5 GHz WIFI (40MHz BW)	UNII-1			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	14.0	13.0	14.0	13.0
		UNII-2A			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	14.0	13.0	14.0	13.0
		UNII-2C			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	14.0	13.0	14.0	13.0
		UNII-3			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	14.0	13.0	14.0	13.0
		UNII-4			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	14.0	13.0	14.0	13.0
	5 GHz WIFI (80MHz BW)	UNII-1					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5					12.0	11.0	11.5	10.5	11.5	10.5
		UNII-2A					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5					13.0	12.0	12.5	11.5	12.5	11.5
		UNII-2C					14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0					14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0					14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0	14.0 ch 106: 12.0	13.0 11.0
		UNII-3					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
		UNII-4					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
	5 GHz WIFI (160MHz BW)	UNII-1/2A					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
		UNII-2C					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
		UNII-3/4					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

2.4.4 6 GHz WLAN Output Power

The below table is applicable in the following conditions:

- Pmax

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																											
			SISO Antenna H										SISO Antenna E										SISO in MIMO MIMO									
			a		ax (SU)		be (SU)						a		ax (SU)		be (SU)						a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.				
Pmax	6 GHz WIFI (20MHz BW) - LPI	UNII-5/6/7/8	8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0					8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0					8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0				
	6 GHz WIFI (40MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0				
	6 GHz WIFI (80MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0				
	6 GHz WIFI (160MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0							11.0	10.0	11.0	10.0				
	6 GHz WIFI (320MHz BW) - LPI	UNII-5/6/7/8					11.0	10.0									11.0	10.0									11.0	10.0				

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																											
			SISO Antenna H										SISO Antenna E										SISO in MIMO MIMO									
			a		ax (SU)		be (SU)						a		ax (SU)		be (SU)						a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.				
Pmax	6 GHz WIFI (20MHz BW) - SP	UNII-5/7	17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0					17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0					17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0	17.0 ch. 2: 9.0	16.0 8.0				
	6 GHz WIFI (40MHz BW) - SP	UNII-5/7			17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0				
	6 GHz WIFI (80MHz BW) - SP	UNII-5/7			17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0				
	6 GHz WIFI (160MHz BW) - SP	UNII-5/7			17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0							17.0	16.0	17.0	16.0				
	6 GHz WIFI (320MHz BW) - SP	UNII-5/7					17.0	16.0									17.0	16.0									17.0	16.0				

Power Level	Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																											
			SISO Antenna H										SISO Antenna E										MIMO SISO in MIMO									
			a		ax (SU)		be (SU)						a		ax (SU)		be (SU)						a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.				
Pmax	6 GHz WIFI (20MHz BW) - VLP	UNII-5/7	6.0	5.0	6.0	5.0	6.0	5.0					6.0	5.0	6.0	5.0	6.0	5.0					6.0	5.0	6.0	5.0	6.0	5.0				
	6 GHz WIFI (40MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0				
	6 GHz WIFI (80MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0				
	6 GHz WIFI (160MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0							6.0	5.0	6.0	5.0				
	6 GHz WIFI (320MHz BW) - VLP	UNII-5/7					6.0	5.0									6.0	5.0									6.0	5.0				

The below table is applicable in the following conditions:

- DSI=0 (Body-worn or Phablet)

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						SISO in MIMO MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 0 (Body-Worn, Hotspot, or Phablet)	6 GHz WIFI (20MHz BW) - LPI	UNII-5/6/7/8	8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0	8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0	8.0	7.0	11.0 ch. 2: 9.0	10.0 8.0	11.0 ch. 2: 9.0	10.0 8.0
	6 GHz WIFI (40MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0
	6 GHz WIFI (80MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0
	6 GHz WIFI (160MHz BW) - LPI	UNII-5/6/7/8			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0			11.0	10.0	11.0	10.0
	6 GHz WIFI (320MHz BW) - LPI	UNII-5/6/7/8					11.0	10.0					11.0	10.0					11.0	10.0

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						SISO in MIMO MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 0 (Body-Worn, Hotspot, or Phablet)	6 GHz WIFI (20MHz BW) - SP	UNII-5/7	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0	11.5 ch. 2: 9.0	10.5 8.0
	6 GHz WIFI (40MHz BW) - SP	UNII-5/7			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5
	6 GHz WIFI (80MHz BW) - SP	UNII-5/7			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5
	6 GHz WIFI (160MHz BW) - SP	UNII-5/7			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5			11.5	10.5	11.5	10.5
	6 GHz WIFI (320MHz BW) - SP	UNII-5/7					11.5	10.5					11.5	10.5					11.5	10.5

Power Level	Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						MIMO SISO in MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 0 (Body-Worn, Hotspot, or Phablet)	6 GHz WIFI (20MHz BW) - VLP	UNII-5/7	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0
	6 GHz WIFI (40MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (80MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (160MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (320MHz BW) - VLP	UNII-5/7					6.0	5.0					6.0	5.0					6.0	5.0

The below table is applicable in the following conditions:

- DSI=1 (RCV)

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						SISO in MIMO MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 1 (Head)	6 GHz WIFI (20MHz BW) - LPI	UNII-5/6/7/8	8.0	7.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	8.0	7.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	8.0	7.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0
	6 GHz WIFI (40MHz BW) - LPI	UNII-5/6/7/8			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (80MHz BW) - LPI	UNII-5/6/7/8			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (160MHz BW) - LPI	UNII-5/6/7/8			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (320MHz BW) - LPI	UNII-5/6/7/8					10.0	9.0					10.0	9.0					10.0	9.0

Power Level	Mode	Band	IEEE 802.11 Modulated Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						SISO in MIMO MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 1 (Head)	6 GHz WIFI (20MHz BW) - SP	UNII-5/7	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0	10.0 ch. 2: 9.0	9.0 8.0
	6 GHz WIFI (40MHz BW) - SP	UNII-5/7			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (80MHz BW) - SP	UNII-5/7			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (160MHz BW) - SP	UNII-5/7			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0			10.0	9.0	10.0	9.0
	6 GHz WIFI (320MHz BW) - SP	UNII-5/7					10.0	9.0					10.0	9.0					10.0	9.0

Power Level	Mode	Band	IEEE 802.11 Modulated/Frame Output Power (in dBm)																	
			SISO Antenna H						SISO Antenna E						MIMO SISO in MIMO					
			a		ax (SU)		be (SU)		a		ax (SU)		be (SU)		a (CDD + STBC)		ax (SU) (CDD + STBC, SDM)		be (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.
DSI = 1 (Head)	6 GHz WIFI (20MHz BW) - VLP	UNII-5/7	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0
	6 GHz WIFI (40MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (80MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (160MHz BW) - VLP	UNII-5/7			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0			6.0	5.0	6.0	5.0
	6 GHz WIFI (320MHz BW) - VLP	UNII-5/7					6.0	5.0					6.0	5.0					6.0	5.0

2.4.5 2.4 GHz Maximum Bluetooth Output Power

The below table is applicable in the following conditions:

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

Mode	Data Rate	Modulated Output Power (in dBm)					
		Single Antenna				Each Chain in Dual Mode	
		Antenna H		Antenna J		MIMO	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
Bluetooth	1Mbps	18.0	17.0	18.0	17.0	12.0	11.0
Bluetooth EDR	2Mbps	15.0	14.0	15.0	14.0	10.0	9.0
Bluetooth EDR	3Mbps	15.0	14.0	15.0	14.0	10.0	9.0
Bluetooth LE	1Mbps	19.0	18.0	19.0	18.0	12.5	11.5
Bluetooth LE	2Mbps	19.0	18.0	19.0	18.0	12.5	11.5
Bluetooth LE	125kbps	8.5	7.5	8.5	7.5	N/A	N/A
Bluetooth LE	500kbps	8.5	7.5	8.5	7.5	N/A	N/A

The below table is applicable in the following conditions:

- DSI=1 (RCV)

Mode	Data Rate	Modulated Output Power (in dBm)					
		Single Antenna				Each Chain in Dual Mode	
		Antenna H		Antenna J		MIMO	
Maximum / Nominal Power		Max	Nom.	Max	Nom.	Max	Nom.
Bluetooth	1Mbps	12.0	11.0	12.0	11.0	12.0	11.0
Bluetooth EDR	2Mbps	12.0	11.0	12.0	11.0	10.0	9.0
Bluetooth EDR	3Mbps	12.0	11.0	12.0	11.0	10.0	9.0
Bluetooth LE	1Mbps	12.5	11.5	12.5	11.5	12.5	11.5
Bluetooth LE	2Mbps	12.5	11.5	12.5	11.5	12.5	11.5
Bluetooth LE	125kbps	8.5	7.5	8.5	7.5	N/A	N/A
Bluetooth LE	500kbps	8.5	7.5	8.5	7.5	N/A	N/A

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
A	Yes	Yes	No	Yes	Yes	Yes
B	Yes	Yes	No	Yes	No	Yes
C	Yes	Yes	No	Yes	No	Yes
D	Yes	Yes	No	Yes	Yes	No
E	Yes	Yes	Yes	No	Yes	No
F	Yes	Yes	Yes	No	No	Yes
I	Yes	Yes	Yes	No	No	Yes
H	Yes	Yes	Yes	No	No	Yes
J	Yes	Yes	Yes	No	Yes	No
MIMO	Yes	Yes	Yes	No	Yes	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 SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
2	GSM voice + 2.4 GHz Bluetooth Dual	Yes	Yes	N/A	Yes	
3	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
4	GSM voice + 2.4 GHz WLAN SISO	Yes	Yes	N/A	Yes	
5	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
6	GSM voice + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
7	GSM voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
8	GSM voice + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
9	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
10	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
11	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
12	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
13	GSM voice + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
14	GSM voice + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
15	GSM voice + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
16	GSM voice + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
17	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
18	GSM voice + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
19	GSM voice + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
20	GSM voice + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
21	GSM voice + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
22	GSM voice + 2.4 GHz Bluetooth Dual + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
23	GSM voice + 2.4 GHz Bluetooth Dual + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
24	GSM voice + 2.4 GHz Bluetooth Dual + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
25	GSM voice + 2.4 GHz Bluetooth Dual + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
26	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
27	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
28	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
29	GSM voice + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
30	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
31	UMTS/LTE/NR + 2.4 GHz Bluetooth Dual	Yes	Yes	N/A	Yes	
32	UMTS/LTE/NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
33	UMTS/LTE/NR + 2.4 GHz WLAN SISO	Yes	Yes	Yes	Yes	
34	UMTS/LTE/NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
35	UMTS/LTE/NR + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
36	UMTS/LTE/NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
37	UMTS/LTE/NR + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
38	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
39	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
40	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
41	UMTS/LTE/NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
42	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
43	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
44	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
45	UMTS/LTE/NR + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
46	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
47	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
48	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
49	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
50	UMTS/LTE/NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
51	UMTS/LTE/NR + 2.4 GHz Bluetooth Dual + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
52	UMTS/LTE/NR + 2.4 GHz Bluetooth Dual + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
53	UMTS/LTE/NR + 2.4 GHz Bluetooth Dual + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
54	UMTS/LTE/NR + 2.4 GHz Bluetooth Dual + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
55	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
56	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
57	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
58	UMTS/LTE/NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
59	LTE + NR	Yes	Yes	N/A	Yes	
60	LTE + NR + 2.4 GHz Bluetooth SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
61	LTE + NR + 2.4 GHz Bluetooth Dual	Yes	Yes	N/A	Yes	
62	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
63	LTE + NR + 2.4 GHz WLAN SISO	Yes	Yes	Yes	Yes	
64	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
65	LTE + NR + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
66	LTE + NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
67	LTE + NR + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
68	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
69	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
70	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
71	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
72	LTE + NR + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	
73	LTE + NR + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	Yes	Yes	Yes	Yes	
74	LTE + NR + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
75	LTE + NR + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
76	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
77	LTE + NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
78	LTE + NR + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
79	LTE + NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
80	LTE + NR + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
81	LTE + NR + 2.4 GHz Bluetooth Dual + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
82	LTE + NR + 2.4 GHz Bluetooth Dual + 5 GHz WLAN SISO	Yes	Yes	N/A	Yes	
83	LTE + NR + 2.4 GHz Bluetooth Dual + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	
84	LTE + NR + 2.4 GHz Bluetooth Dual + 6 GHz WLAN SISO	Yes	Yes	N/A	Yes	
85	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN MIMO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
86	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN SISO	Yes^	Yes	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
87	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN MIMO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
88	LTE + NR + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN SISO	Yes^	Yes	N/A	Yes	^ Bluetooth Tethering is considered only on Ant H
89	GPRS/EDGE + 2.4 GHz Bluetooth SISO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
90	GPRS/EDGE + 2.4 GHz Bluetooth Dual	N/A	N/A	N/A	Yes	
91	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
92	GPRS/EDGE + 2.4 GHz WLAN SISO	N/A	N/A	Yes	Yes	
93	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
94	GPRS/EDGE + 5 GHz WLAN SISO	N/A	N/A	Yes	Yes	
95	GPRS/EDGE + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
96	GPRS/EDGE + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	
97	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
98	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN SISO	N/A	N/A	Yes	Yes	
99	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
100	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	
101	GPRS/EDGE + 2.4 GHz WLAN SISO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	
102	GPRS/EDGE + 2.4 GHz WLAN SISO + 5 GHz WLAN SISO	N/A	N/A	Yes	Yes	
103	GPRS/EDGE + 2.4 GHz WLAN SISO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
104	GPRS/EDGE + 2.4 GHz WLAN SISO + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	
105	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
106	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
107	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 5 GHz WLAN SISO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
108	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
109	GPRS/EDGE + 2.4 GHz Bluetooth SISO + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	
110	GPRS/EDGE + 2.4 GHz Bluetooth Dual + 5 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
111	GPRS/EDGE + 2.4 GHz Bluetooth Dual + 5 GHz WLAN SISO	N/A	N/A	N/A	Yes	
112	GPRS/EDGE + 2.4 GHz Bluetooth Dual + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
113	GPRS/EDGE + 2.4 GHz Bluetooth Dual + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	
114	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN MIMO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
115	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 5 GHz WLAN SISO	N/A	N/A	Yes^	Yes	^ Bluetooth Tethering is considered only on Ant H
116	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	
117	GPRS/EDGE + 2.4 GHz Bluetooth Ant H + 2.4 GHz WLAN Ant J + 6 GHz WLAN SISO	N/A	N/A	N/A	Yes	

1. No other simultaneous scenarios besides described above is supported for this model.
2. SISO represents 2.4 GHz WLAN/BT transmission on Ant H or Ant J, and 5/6 GHz transmission on Ant H or Ant E.
3. 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.
4. 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.
5. 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.
6. 6 GHz Wireless Router is not supported, therefore it was not evaluated for wireless router conditions.
7. This device supports 2x2 MIMO Tx for WLAN 802.11a/b/g/n/ac/ax/be. 802.11a/b/g/n/ac/ax/be supports CDD and STBC and 802.11n/ac/ax/be additionally supports SDM.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering on Ant H only.
10. This device supports VoLTE.
11. This device supports VoNR.
12. LTE + 5G NR FR1 Scenarios are limited to EN-DC combinations with anchor bands as shown in the NR FR1 checklist.
13. UWB and 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/be with the following features:

a) Up to 320 MHz Bandwidth only for 6GHz
b) Up to 160 MHz Bandwidth only for 5/6 GHz
c) Up to 20 MHz Bandwidth only for 2.4 GHz
d) 2 Tx antenna output
e) Up to 4KQAM is supported
f) TDWR and Band gap channels are supported for 5/6 GHz
g) 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/be follows initial test configuration procedures of KDB 248227, with 802.11ax/be considered a higher order 802.11 mode.

Per FCC guidance, SAR was performed using 6.5 GHz SAR probe calibration factors for WIFI 6GHz/UWB and 8GHz SAR probe calibration factors for UWB. 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. The downlink carrier aggregation exclusion analysis can be found in Downlink LTE CA RF Conducted Powers Appendix.

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 can transmit with antenna switching for bands/modes on antenna A,B,E, and F. 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).

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

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.

2.11 Bibliography

Report Type	Report Serial Number
RF Exposure Part 0 Test Report	1M2408260066-04.A3L
RF Exposure Part 2 Test Report	1M2408260066-02.A3L
RF Exposure Compliance Summary Report	1M2408260066-03.A3L

3 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 12: 699.7 - 715.3 MHz				
	LTE Band 17: 706.5 - 713.5 MHz				
	LTE Band 13: 779.5 - 784.5 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 41: 2498.5 - 2687.5 MHz				
Channel Bandwidths	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 17: 5 MHz, 10 MHz				
	LTE Band 13: 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 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
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 17: 5 MHz	706.5 (23755)		710 (23790)	713.5 (23825)	
LTE Band 17: 10 MHz	709 (23780)		710 (23790)	711 (23800)	
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 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 41: 5 MHz	2502.5 (39715)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2505 (39740)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2507.5 (39765)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2510 (39790)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
UE Category	UL UE Cat 18 , DL UE Cat 20				
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 as shown in the RF Conducted Powers section of this report and the Downlink LTE CA RF Conducted Powers Appendix. 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 n5: 826.5 - 846.5 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 n41: 2501.01 - 2685 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 n5: 5 MHz, 10 MHz, 15 MHz, 20 MHz NR Band n66: 5 MHz, 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 45 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, 25 MHz, 30 MHz, 35 MHz, 40 MHz NR Band n41: 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 35 MHz, 40 MHz, 45 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 NR Band n77 DoD: 10 MHz, 15 MHz, 20 MHz, 25 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz						
Channel Numbers and Frequencies (MHz)							
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 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 n66: 45 MHz	1732.5 (346500)		1745 (349000)			1757.5 (351500)	
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 n2: 25 MHz	(N/A)		1880 (376000)			(N/A)	
NR Band n2: 30 MHz	(N/A)		1880 (376000)			(N/A)	
NR Band n2: 35 MHz	(N/A)		1880 (376000)			(N/A)	
NR Band n2: 40 MHz	(N/A)		1880 (376000)			(N/A)	
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: 25 MHz	2508.51 (501702)	2550.75 (510150)	2592.99 (518598)			2635.26 (527052)	2677.5 (535500)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)			2634 (526800)	2674.98 (534996)
NR Band n41: 35 MHz	2513.52 (502704)	2553.24 (510648)	2592.99 (518598)			2632.74 (526548)	2672.49 (534498)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	(N/A)			2618.67 (523734)	2670 (534000)
NR Band n41: 45 MHz	2518.5 (503700)	2568.18 (513636)	2617.83 (523566)			2667.48 (533496)	
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	2592.99 (518598)		2592.99 (518598)			2640 (528000)	
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 (630666)		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 n5, n66, n25, n2	15 kHz						
SCS for NR Band n41, n77, n77 DoD	30 kHz						
Modulations Supported in UL	DFT-s-OFDM: π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 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 n5	2/66						
LTE Anchor Bands for NR Band n66	2/5/12/13						
LTE Anchor Bands for NR Band n25	12/13						
LTE Anchor Bands for NR Band n2	4/5/12/13/66						
LTE Anchor Bands for NR Band n41	2/4/5/12/26/66						
LTE Anchor Bands for NR Band n77	2/5/12/13/66						
LTE Anchor Bands for NR Band n77 DoD	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:

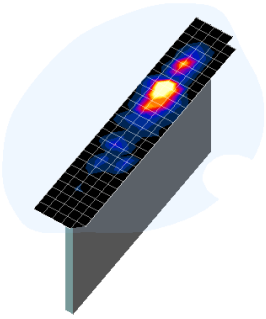

Figure 5-1
Sample SAR Area Scan

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].

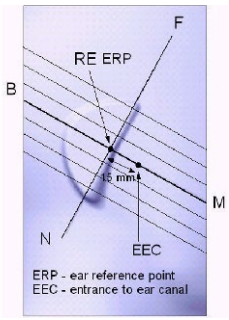

Figure 6-1
Close-Up Side view of ERP

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.

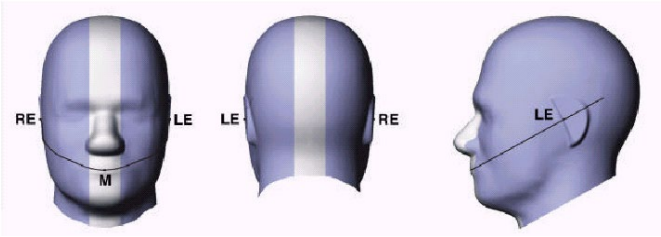

Figure 6-2
Front, back and side view of SAM Twin Phantom

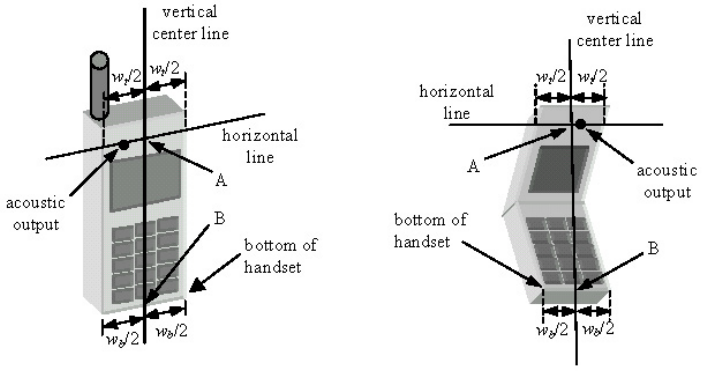

Figure 6-3
Handset Vertical Center & Horizontal Line Reference Points

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.

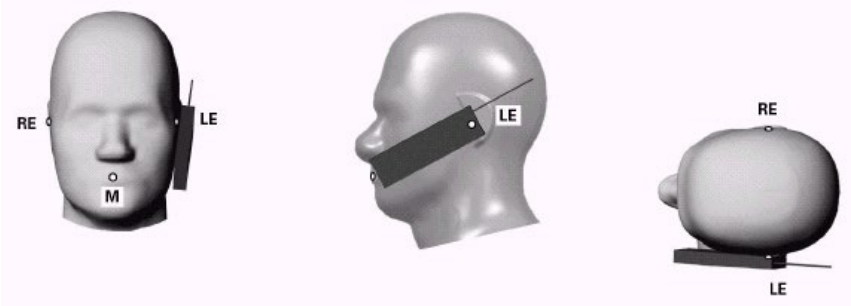

Figure 7-1 Front, Side and Top View of Cheek Position

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).

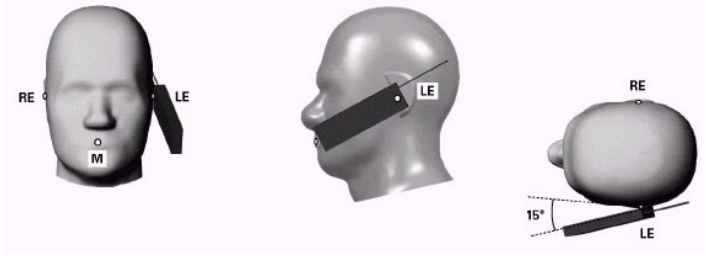

Figure 7-2 Front, Side and Top View of Ear/15º Tilt Position

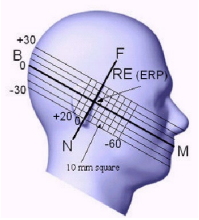

Figure 7-3
Side view w/ relevant markings

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.

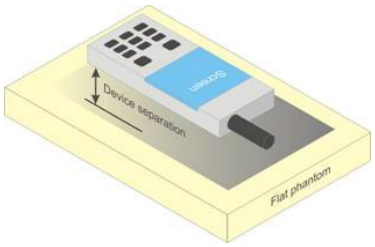

Figure 7-4
Sample Body-Worn Diagram

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. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

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/be 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

All conducted power measurements for Sub6 WWAN technologies and bands in this section were performed by setting *Reserve_power_margin* (Qualcomm® Smart Transmit EFS entry) to 0dB, so that the EUT transmits continuously at minimum (P_{limit}, maximum tune up output power P_{max}).

10.1 GSM Conducted Powers

Table 10-1
Measured P_{max} for all DSI for GSM 850 Ant A
Measured P_{limit} for DSI = 0 (Body-worn, Hotspot or Phablet) for GSM 1900 Ant A

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	32.04	32.06	30.31	**28.57**	26.68	25.81	24.58	22.72	21.72
	190	32.50	32.52	30.51	**28.77**	26.92	25.71	24.64	22.70	21.77
	251	32.48	32.51	30.30	**28.75**	26.90	25.93	24.84	22.91	21.83
GSM 1900	512	28.22	28.45	25.35	23.67	**22.38**	24.80	23.60	21.40	20.05
	661	28.52	28.54	25.42	23.75	**22.42**	24.65	23.42	21.41	20.36
	810	28.33	28.44	25.21	23.63	**22.43**	24.54	23.34	21.38	20.33

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	22.84	22.86	24.12	**24.14**	23.50	16.61	18.39	18.29	18.54
	190	23.30	23.32	24.32	**24.34**	23.74	16.51	18.45	18.27	18.59
	251	23.28	23.31	24.11	**24.32**	23.72	16.73	18.65	18.48	18.65
GSM 1900	512	19.02	19.25	19.16	19.24	**19.20**	15.60	17.41	16.97	16.87
	661	19.32	19.34	19.23	19.32	**19.24**	15.45	17.23	16.98	17.18
	810	19.13	19.24	19.02	19.20	**19.25**	15.34	17.15	16.95	17.15

GSM 850	**Frame Avg.Targets:**	23.30	23.30	23.81	**24.07**	23.82	17.80	18.81	18.57	18.82
GSM 1900		20.00	20.00	20.01	19.97	**20.02**	16.80	17.81	17.57	17.82

Table 10-2
Measured P_{max} for DSI = 1 (Head) for GSM 1900 Ant A

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	29.23	29.47	26.84	**25.62**	23.71	24.70	23.56	21.30	19.93
	661	29.41	29.70	27.01	**25.68**	23.72	24.59	23.44	21.41	20.41
	810	29.31	29.68	27.02	**25.60**	23.56	24.51	23.30	21.37	20.32

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	20.03	20.27	20.65	**21.19**	20.53	15.50	17.37	16.87	16.75
	661	20.21	20.50	20.82	**21.25**	20.54	15.39	17.25	16.98	17.23
	810	20.11	20.48	20.83	**21.17**	20.38	15.31	17.11	16.94	17.14
GSM 1900	Frame Avg.Targets:	20.80	20.80	21.31	**21.57**	20.82	16.30	17.31	17.07	17.32

Table 10-3
Measured P_{max} for DSI = 0 (Body-worn, Hotspot or Phablet) for GSM 850 Ant E

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	31.50	31.51	29.93	**28.14**	26.38	25.51	24.17	22.23	21.12
	190	31.72	31.71	30.16	**28.46**	26.53	25.62	24.52	22.44	21.37
	251	31.99	31.93	30.27	**28.41**	26.12	25.52	24.28	22.38	21.32

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	22.30	22.31	23.74	**23.71**	23.20	16.31	17.98	17.80	17.94
	190	22.52	22.51	23.97	**24.03**	23.35	16.42	18.33	18.01	18.19
	251	22.79	22.73	24.08	**23.98**	22.94	16.32	18.09	17.95	18.14
GSM 850	Frame Avg.Targets:	23.30	23.30	23.81	**24.07**	23.82	17.80	18.81	18.57	18.82

Table 10-4
Measured P_{limit} for DSI = 1 (Head) for GSM 850 Ant E

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	28.90	28.90	25.95	23.94	**22.79**	25.51	24.17	22.23	21.12
	190	29.76	29.74	26.02	24.22	**22.85**	25.62	24.52	22.44	21.37
	251	29.10	29.09	25.73	24.24	**23.16**	25.52	24.28	22.38	21.32

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	19.70	19.70	19.76	19.51	**19.61**	16.31	17.98	17.80	17.94
	190	20.56	20.54	19.83	19.79	**19.67**	16.42	18.33	18.01	18.19
	251	19.90	19.89	19.54	19.81	**19.98**	16.32	18.09	17.95	18.14
GSM 850	**Frame Avg.Targets:**	20.50	20.50	20.51	20.47	**20.52**	17.80	18.81	18.57	18.82

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: 33 (Max 4 Tx uplink slots)
EDGE Multislot class: 33 (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_{max} for all DSI for UMTS 850 Ant A
Measured P_{limit} for DSI = 0 (Body-worn, Hotspot or Phablet) for UMTS 1750 & UMTS 1900 Ant A

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.26	24.14	**24.31**	**19.95**	19.82	19.85	**19.53**	19.40	19.34	-
99		12.2 kbps AMR	24.24	24.14	24.30	19.93	19.81	19.71	19.51	19.40	19.33	-
6	HSDPA	Subtest 1	23.40	23.38	23.41	18.88	18.64	18.60	17.97	17.84	17.68	0
6		Subtest 2	23.41	23.40	23.42	18.89	18.66	18.60	17.97	17.79	17.64	0
6		Subtest 3	22.91	22.85	22.91	18.38	18.16	18.10	17.46	17.34	17.12	0.5
6		Subtest 4	22.91	22.86	22.91	18.38	18.18	18.11	17.44	17.29	17.16	0.5
6	HSUPA	Subtest 1	23.40	23.35	23.39	18.87	18.69	18.58	17.96	17.85	17.67	0
6		Subtest 2	21.36	21.35	21.38	16.87	16.67	16.60	15.96	15.85	15.67	2
6		Subtest 3	22.38	22.36	22.38	17.87	17.61	17.57	17.01	16.88	16.64	1
6		Subtest 4	21.38	21.34	21.36	16.84	16.68	16.56	15.97	15.82	15.63	2
6		Subtest 5	23.37	23.34	23.40	18.91	18.69	18.61	17.97	17.91	17.72	0
8	DC-HSDPA	Subtest 1	23.35	23.32	23.41	18.90	18.67	18.60	17.99	17.85	17.67	0
8		Subtest 2	23.35	23.34	23.39	18.94	18.70	18.57	17.96	17.81	17.64	0
8		Subtest 3	22.86	22.80	22.91	18.45	18.19	18.12	17.44	17.33	17.11	0.5
8		Subtest 4	22.86	22.80	22.91	18.44	18.21	18.11	17.47	17.32	17.13	0.5

Table 10-6
Measured P_{max} for DSI = 1 (Head) for UMTS 1750 & UMTS 1900 Ant A

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	**22.85**	22.74	22.62	23.00	**23.05**	22.96	-
99		12.2 kbps AMR	22.85	22.76	22.57	22.92	22.93	22.88	-
6	HSDPA	Subtest 1	21.93	21.69	21.64	22.00	21.88	21.75	0
6		Subtest 2	21.95	21.72	21.62	21.98	21.88	21.72	0
6		Subtest 3	21.45	21.21	21.14	21.48	21.38	21.23	0.5
6		Subtest 4	21.44	21.23	21.12	21.48	21.38	21.24	0.5
6	HSUPA	Subtest 1	21.93	21.68	21.60	21.99	21.87	21.72	0
6		Subtest 2	19.92	19.66	19.65	20.03	19.87	19.67	2
6		Subtest 3	20.90	20.72	20.60	20.97	20.87	20.70	1
6		Subtest 4	19.92	19.69	19.59	20.01	19.86	19.65	2
6		Subtest 5	21.97	21.75	21.67	22.01	21.92	21.78	0
8	DC-HSDPA	Subtest 1	21.93	21.72	21.60	22.01	21.91	21.80	0
8		Subtest 2	21.98	21.75	21.64	22.03	21.88	21.75	0
8		Subtest 3	21.47	21.23	21.15	21.50	21.42	21.25	0.5
8		Subtest 4	21.48	21.25	21.15	21.51	21.45	21.29	0.5

Table 10-7
Measured P_{max} for DSI = 0 (Body-worn, Hotspot or Phablet) for UMTS 850 Ant E

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	23.80	23.71	**23.85**	-
99		12.2 kbps AMR	23.81	23.69	23.88	-
6	HSDPA	Subtest 1	23.15	23.11	23.17	0
6		Subtest 2	23.16	23.11	23.17	0
6		Subtest 3	22.63	22.61	22.61	0.5
6		Subtest 4	22.64	22.61	22.67	0.5
6	HSUPA	Subtest 1	23.18	23.12	23.19	0
6		Subtest 2	21.18	21.16	21.21	2
6		Subtest 3	22.14	22.12	22.18	1
6		Subtest 4	21.18	21.14	21.19	2
6		Subtest 5	23.17	23.16	23.20	0
8	DC-HSDPA	Subtest 1	23.13	23.10	23.16	0
8		Subtest 2	23.17	23.13	23.18	0
8		Subtest 3	22.67	22.61	22.78	0.5
8		Subtest 4	22.68	22.62	22.66	0.5

Table 10-8
Measured P_{limit} for DSI = 1 (Head) for UMTS 850 Ant E

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	
99	WCDMA	12.2 kbps RMC	20.23	20.08	**20.25**	-
99		12.2 kbps AMR	20.23	20.08	20.26	-
6	HSDPA	Subtest 1	19.51	19.49	19.56	0
6		Subtest 2	19.52	19.49	19.57	0
6		Subtest 3	19.01	18.98	19.06	0.5
6		Subtest 4	19.02	18.95	19.07	0.5
6	HSUPA	Subtest 1	19.55	19.52	19.56	0
6		Subtest 2	17.50	17.50	17.53	2
6		Subtest 3	18.47	18.47	18.58	1
6		Subtest 4	17.50	17.46	17.53	2
6		Subtest 5	19.54	19.49	19.57	0
8	DC-HSDPA	Subtest 1	19.51	19.46	19.55	0
8		Subtest 2	19.51	19.51	19.57	0
8		Subtest 3	19.01	19.00	19.06	0.5
8		Subtest 4	19.02	18.99	19.10	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 12

Table 10-9
LTE Band 12 Ant A 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	**23.46**	0	0
	1	25	23.42		0
	1	49	23.34		0
	25	0	22.47	0-1	1
	25	12	22.47		1
	25	25	**22.57**		1
	50	0	22.52		1
16QAM	1	0	22.72	0-1	1
	1	25	22.69		1
	1	49	22.64		1
	25	0	21.51	0-2	2
	25	12	21.47		2
	25	25	21.57		2
	50	0	21.56		2
64QAM	1	0	21.72	0-2	2
	1	25	21.84		2
	1	49	21.69		2
	25	0	20.47	0-3	3
	25	12	20.50		3
	25	25	20.52		3
	50	0	20.52		3
256QAM	1	0	18.63	0-5	5
	1	25	18.74		5
	1	49	18.63		5
	25	0	18.45		5
	25	12	18.48		5
	25	25	18.50		5
	50	0	18.52		5

Table 10-10
LTE Band 12 Ant E Measured P_{Max} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	23.15	0	0
	1	25	**23.18**		0
	1	49	23.10		0
	25	0	22.20	0-1	1
	25	12	22.22		1
	25	25	**22.29**		1
	50	0	22.28		1
16QAM	1	0	22.49	0-1	1
	1	25	22.45		1
	1	49	22.35		1
	25	0	21.25	0-2	2
	25	12	21.25		2
	25	25	21.30		2
	50	0	21.27		2
64QAM	1	0	21.49	0-2	2
	1	25	21.46		2
	1	49	21.45		2
	25	0	20.23	0-3	3
	25	12	20.24		3
	25	25	20.31		3
	50	0	20.29		3
256QAM	1	0	18.30	0-5	5
	1	25	18.49		5
	1	49	18.28		5
	25	0	18.20		5
	25	12	18.24		5
	25	25	18.23		5
	50	0	18.23		5

Table 10-11
LTE Band 12 Ant E Measured P_{Limit} for DSI = 1 (Head) - 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	**20.18**	0	0
	1	25	20.14		0
	1	49	20.13		0
	25	0	20.11	0-1	0
	25	12	20.11		0
	25	25	**20.16**		0
	50	0	20.15		0
16QAM	1	0	20.24	0-1	0
	1	25	20.37		0
	1	49	20.26		0
	25	0	20.11	0-2	0
	25	12	20.15		0
	25	25	20.16		0
	50	0	20.21		0
64QAM	1	0	20.54	0-2	0
	1	25	20.43		0
	1	49	20.40		0
	25	0	20.13	0-3	0
	25	12	20.12		0
	25	25	20.20		0
	50	0	20.19		0
256QAM	1	0	18.45	0-5	2
	1	25	18.55		2
	1	49	18.37		2
	25	0	18.32		2
	25	12	18.37		2
	25	25	18.37		2
	50	0	18.36		2

10.3.2 LTE Band 13

Table 10-12
LTE Band 13 Ant A Measured P_{Max} for all DSI - 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	23.75	0	0
	1	25	**23.89**		0
	1	49	23.72		0
	25	0	22.78	0-1	1
	25	12	**22.79**		1
	25	25	22.71		1
	50	0	22.73		1
16QAM	1	0	22.89	0-1	1
	1	25	22.99		1
	1	49	22.85		1
	25	0	21.82	0-2	2
	25	12	21.83		2
	25	25	21.78		2
	50	0	21.76		2
64QAM	1	0	22.00	0-2	2
	1	25	22.12		2
	1	49	21.86		2
	25	0	20.81	0-3	3
	25	12	20.83		3
	25	25	20.76		3
	50	0	20.76		3
256QAM	1	0	18.85	0-5	5
	1	25	19.03		5
	1	49	18.79		5
	25	0	18.79		5
	25	12	18.83		5
	25	25	18.77		5
	50	0	18.77		5

Table 10-13
LTE Band 13 Ant E Measured P_{Max} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	23.81	0	0
	1	25	**23.93**		0
	1	49	23.65		0
	25	0	**22.57**	0-1	1
	25	12	22.56		1
	25	25	22.48		1
	50	0	22.50		1
16QAM	1	0	22.80	0-1	1
	1	25	23.05		1
	1	49	22.71		1
	25	0	21.55	0-2	2
	25	12	21.59		2
	25	25	21.49		2
	50	0	21.53		2
64QAM	1	0	21.86	0-2	2
	1	25	21.87		2
	1	49	21.64		2
	25	0	20.58	0-3	3
	25	12	20.56		3
	25	25	20.50		3
	50	0	20.50		3
256QAM	1	0	18.69	0-5	5
	1	25	18.80		5
	1	49	18.43		5
	25	0	18.58		5
	25	12	18.56		5
	25	25	18.54		5
	50	0	18.53		5

Table 10-14
LTE Band 13 Ant E Measured P_{Limit} for DSI = 1 (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	20.47	0	0
	1	25	**20.67**		0
	1	49	20.33		0
	25	0	20.30	0-1	0
	25	12	**20.34**		0
	25	25	20.27		0
	50	0	20.30		0
16QAM	1	0	20.64	0-1	0
	1	25	20.68		0
	1	49	20.51		0
	25	0	20.36	0-2	0
	25	12	20.34		0
	25	25	20.32		0
	50	0	20.30		0
64QAM	1	0	20.62	0-2	0
	1	25	20.61		0
	1	49	20.41		0
	25	0	20.34	0-3	0
	25	12	20.34		0
	25	25	20.29		0
	50	0	20.30		0
256QAM	1	0	18.72	0-5	2
	1	25	18.81		2
	1	49	18.68		2
	25	0	18.59		2
	25	12	18.57		2
	25	25	18.52		2
	50	0	18.54		2

10.3.3 LTE Band 26

Table 10-15
LTE Band 26 Ant A Measured P_{Max} for all DSI - 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	23.85	0	0
	1	36	**24.02**		0
	1	74	23.93		0
	36	0	22.82	0-1	1
	36	18	**22.91**		1
	36	37	22.83		1
	75	0	22.86		1
16QAM	1	0	23.08	0-1	1
	1	36	23.20		1
	1	74	23.16		1
	36	0	21.86	0-2	2
	36	18	21.96		2
	36	37	21.91		2
	75	0	21.93		2
64QAM	1	0	22.14	0-2	2
	1	36	22.27		2
	1	74	22.12		2
	36	0	20.89	0-3	3
	36	18	20.97		3
	36	37	20.90		3
	75	0	20.92		3
256QAM	1	0	19.17	0-5	5
	1	36	19.22		5
	1	74	19.07		5
	36	0	18.94		5
	36	18	18.93		5
	36	37	18.86		5
	75	0	18.92		5

Table 10-16
LTE Band 26 Ant E Measured P_{Max} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**23.46**	0	0
	1	36	23.29		0
	1	74	23.24		0
	36	0	22.38	0-1	1
	36	18	**22.44**		1
	36	37	22.39		1
	75	0	22.40		1
16QAM	1	0	22.45	0-1	1
	1	36	22.54		1
	1	74	22.52		1
	36	0	21.44	0-2	2
	36	18	21.51		2
	36	37	21.42		2
	75	0	21.45		2
64QAM	1	0	21.51	0-2	2
	1	36	21.64		2
	1	74	21.55		2
	36	0	20.39	0-3	3
	36	18	20.48		3
	36	37	20.38		3
	75	0	20.42		3
256QAM	1	0	18.43	0-5	5
	1	36	18.60		5
	1	74	18.41		5
	36	0	18.41		5
	36	18	18.48		5
	36	37	18.42		5
	75	0	18.44		5

Table 10-17
LTE Band 26 Ant E Measured P_{Limit} for DSI = 1 (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	**20.16**	0	0
	1	36	20.08		0
	1	74	20.10		0
	36	0	20.11	0-1	0
	36	18	**20.22**		0
	36	37	20.13		0
	75	0	20.15		0
16QAM	1	0	20.33	0-1	0
	1	36	20.32		0
	1	74	20.22		0
	36	0	20.15	0-2	0
	36	18	20.25		0
	36	37	20.15		0
	75	0	20.18		0
64QAM	1	0	20.32	0-2	0
	1	36	20.42		0
	1	74	20.33		0
	36	0	20.17	0-3	0
	36	18	20.25		0
	36	37	20.18		0
	75	0	20.21		0
256QAM	1	0	18.49	0-5	2
	1	36	18.52		2
	1	74	18.51		2
	36	0	18.37		2
	36	18	18.41		2
	36	37	18.38		2
	75	0	18.42		2

10.3.4 LTE Band 66

Table 10-18
LTE Band 66 (AWS) Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**18.22**	18.08	18.05	0	0
	1	50	18.20	18.07	18.09		0
	1	99	18.09	18.01	18.01		0
	50	0	**18.25**	18.15	18.08	0-1	0
	50	25	18.16	18.12	18.13		0
	50	50	18.09	18.07	18.13		0
	100	0	18.15	18.09	18.14		0
16QAM	1	0	18.49	18.32	18.36	0-1	0
	1	50	18.46	18.33	18.41		0
	1	99	18.40	18.23	18.41		0
	50	0	18.28	18.16	18.09	0-2	0
	50	25	18.20	18.15	18.10		0
	50	50	18.16	18.13	18.12		0
	100	0	18.17	18.13	18.13		0
64QAM	1	0	18.27	18.24	18.15	0-2	0
	1	50	18.31	18.27	18.27		0
	1	99	18.20	18.22	18.19		0
	50	0	18.24	18.12	18.09	0-3	0
	50	25	18.17	18.12	18.14		0
	50	50	18.12	18.09	18.09		0
	100	0	18.14	18.10	18.10		0
256QAM	1	0	17.82	17.69	17.61	0-5	0.5
	1	50	17.98	17.83	17.86		0.5
	1	99	17.61	17.69	17.66		0.5
	50	0	17.73	17.66	17.60		0.5
	50	25	17.69	17.67	17.63		0.5
	50	50	17.65	17.58	17.56		0.5
	100	0	17.63	17.61	17.60		0.5

Table 10-19
LTE Band 66 (AWS) Ant A Measured P_{Max} for DSI = 1 (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	**22.77**	22.59	22.66	0	0
	1	50	22.76	22.62	22.67		0
	1	99	22.66	22.53	22.64		0
	50	0	**21.80**	21.71	21.59	0-1	1
	50	25	21.74	21.70	21.67		1
	50	50	21.68	21.67	21.64		1
	100	0	21.70	21.70	21.66		1
16QAM	1	0	21.99	21.93	21.86	0-1	1
	1	50	21.95	22.03	21.93		1
	1	99	21.80	21.89	21.91		1
	50	0	20.80	20.70	20.62	0-2	2
	50	25	20.76	20.67	20.69		2
	50	50	20.71	20.62	20.68		2
	100	0	20.70	20.65	20.69		2
64QAM	1	0	20.91	20.82	20.87	0-2	2
	1	50	20.96	20.83	20.89		2
	1	99	20.81	20.72	20.88		2
	50	0	19.82	19.69	19.63	0-3	3
	50	25	19.72	19.71	19.68		3
	50	50	19.68	19.65	19.67		3
	100	0	19.70	19.66	19.67		3
256QAM	1	0	17.91	17.89	17.66	0-5	5
	1	50	17.87	17.83	17.73		5
	1	99	17.75	17.72	17.73		5
	50	0	17.83	17.68	17.59		5
	50	25	17.69	17.69	17.68		5
	50	50	17.64	17.63	17.64		5
	100	0	17.70	17.65	17.64		5

Table 10-20
LTE Band 66 (AWS) Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	19.25	19.29	19.52	0	0
	1	50	19.46	19.44	**19.60**		0
	1	99	19.42	19.48	19.57		0
	50	0	19.36	19.47	19.52	0-1	0
	50	25	19.47	19.48	19.54		0
	50	50	19.43	19.58	**19.59**		0
	100	0	19.41	19.47	19.52		0
16QAM	1	0	19.52	19.65	19.71	0-1	0
	1	50	19.62	19.84	19.78		0
	1	99	19.59	19.86	19.78		0
	50	0	19.38	19.47	19.58	0-2	0
	50	25	19.43	19.50	19.56		0
	50	50	19.45	19.56	19.54		0
	100	0	19.46	19.48	19.51		0
64QAM	1	0	19.59	19.47	19.76	0-2	0
	1	50	19.71	19.64	19.82		0
	1	99	19.66	19.79	19.76		0
	50	0	19.36	19.49	19.59	0-3	0
	50	25	19.45	19.48	19.54		0
	50	50	19.45	19.59	19.63		0
	100	0	19.45	19.48	19.52		0
256QAM	1	0	17.59	17.70	17.75	0-5	2
	1	50	17.88	17.96	17.81		2
	1	99	17.86	17.92	17.79		2
	50	0	17.54	17.70	17.73		2
	50	25	17.68	17.70	17.78		2
	50	50	17.63	17.79	17.79		2
	100	0	17.62	17.67	17.74		2

Table 10-21
LTE Band 66 (AWS) Ant F Measured P_{Limit} for DSI = 1 (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	17.35	17.48	17.36	0	0
	1	50	17.38	17.55	17.40		0
	1	99	17.37	17.53	**17.56**		0
	50	0	17.30	17.47	17.53	0-1	0
	50	25	17.39	17.45	17.52		0
	50	50	17.39	17.55	**17.60**		0
	100	0	17.40	17.45	17.50		0
16QAM	1	0	17.66	17.75	17.78	0-1	0
	1	50	17.60	17.80	17.78		0
	1	99	17.70	17.81	17.81		0
	50	0	17.28	17.42	17.50	0-2	0
	50	25	17.37	17.47	17.58		0
	50	50	17.37	17.54	17.61		0
	100	0	17.40	17.44	17.55		0
64QAM	1	0	17.46	17.73	17.59	0-2	0
	1	50	17.56	17.79	17.67		0
	1	99	17.62	17.79	17.72		0
	50	0	17.29	17.48	17.48	0-3	0
	50	25	17.42	17.49	17.55		0
	50	50	17.38	17.50	17.56		0
	100	0	17.39	17.46	17.51		0
256QAM	1	0	17.34	17.64	17.51	0-5	0
	1	50	17.53	17.84	17.69		0
	1	99	17.65	17.89	17.68		0
	50	0	17.30	17.43	17.52		0
	50	25	17.43	17.46	17.52		0
	50	50	17.41	17.56	17.57		0
	100	0	17.40	17.45	17.51		0

10.3.5 LTE Band 25

Table 10-22
LTE Band 25 (PCS) Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**17.90**	17.66	17.75	0	0
	1	50	17.81	17.67	17.79		0
	1	99	17.77	17.67	17.78		0
	50	0	**17.89**	17.79	17.74	0-1	0
	50	25	17.80	17.81	17.73		0
	50	50	17.78	17.78	17.80		0
	100	0	17.76	17.77	17.72		0
16QAM	1	0	18.05	18.01	17.92	0-1	0
	1	50	18.01	18.04	18.00		0
	1	99	17.95	17.96	17.92		0
	50	0	17.90	17.83	17.71	0-2	0
	50	25	17.82	17.79	17.73		0
	50	50	17.81	17.78	17.80		0
	100	0	17.80	17.78	17.70		0
64QAM	1	0	18.00	18.00	17.99	0-2	0
	1	50	18.12	18.02	18.00		0
	1	99	17.86	17.94	17.81		0
	50	0	17.90	17.84	17.73	0-3	0
	50	25	17.82	17.82	17.74		0
	50	50	17.79	17.82	17.83		0
	100	0	17.79	17.80	17.72		0
256QAM	1	0	18.01	17.93	17.74	0-5	0
	1	50	17.97	17.92	17.85		0
	1	99	17.81	17.90	17.76		0
	50	0	17.86	17.79	17.74		0
	50	25	17.81	17.82	17.71		0
	50	50	17.78	17.77	17.76		0
	100	0	17.77	17.79	17.73		0

Table 10-23
LTE Band 25 (PCS) Ant A Measured P_{Max} for DSI = 1 (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	**23.06**	22.94	22.83	0	0
	1	50	23.02	22.94	22.87		0
	1	99	22.92	22.86	22.85		0
	50	0	**22.00**	21.90	21.83	0-1	1
	50	25	21.93	21.94	21.84		1
	50	50	21.88	21.90	21.92		1
	100	0	21.89	21.89	21.85		1
16QAM	1	0	22.30	22.18	22.08	0-1	1
	1	50	22.29	22.21	22.04		1
	1	99	22.17	22.01	22.09		1
	50	0	21.02	20.96	20.86	0-2	2
	50	25	20.94	20.94	20.85		2
	50	50	20.89	20.94	20.92		2
	100	0	20.89	20.91	20.84		2
64QAM	1	0	21.14	21.17	20.99	0-2	2
	1	50	21.21	21.07	21.08		2
	1	99	21.08	21.07	21.06		2
	50	0	20.01	19.94	19.85	0-3	3
	50	25	19.92	19.95	19.87		3
	50	50	19.89	19.90	19.95		3
	100	0	19.90	19.93	19.88		3
256QAM	1	0	18.08	18.06	18.03	0-5	5
	1	50	18.18	18.13	18.12		5
	1	99	18.00	17.99	18.06		5
	50	0	18.01	17.92	17.82		5
	50	25	17.89	17.90	17.84		5
	50	50	17.83	17.87	17.86		5
	100	0	17.86	17.89	17.82		5

Table 10-24
LTE Band 25 (PCS) Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	19.94	19.96	19.73	0	0
	1	50	19.98	19.87	19.84		0
	1	99	**20.05**	19.88	19.95		0
	50	0	19.93	19.98	19.84	0-1	0
	50	25	**20.00**	19.98	19.98		0
	50	50	19.95	19.93	19.96		0
	100	0	19.99	19.96	19.96		0
16QAM	1	0	20.15	20.12	20.07	0-1	0
	1	50	20.12	20.11	20.27		0
	1	99	20.14	20.06	20.26		0
	50	0	19.94	19.95	19.90	0-2	0
	50	25	19.99	20.03	19.95		0
	50	50	19.95	19.96	19.97		0
	100	0	19.96	19.94	19.97		0
64QAM	1	0	20.12	20.12	20.08	0-2	0
	1	50	20.08	20.06	20.20		0
	1	99	20.15	20.09	20.25		0
	50	0	19.96	19.99	19.90	0-3	0
	50	25	20.01	20.03	20.01		0
	50	50	19.97	19.97	20.01		0
	100	0	19.93	19.98	19.96		0
256QAM	1	0	18.23	18.31	18.24	0-5	2
	1	50	18.30	18.46	18.36		2
	1	99	18.22	18.27	18.08		2
	50	0	18.16	18.20	18.07		2
	50	25	18.20	18.20	18.20		2
	50	50	18.15	18.12	18.18		2
	100	0	18.12	18.17	18.20		2

Table 10-25
LTE Band 25 (PCS) Ant F Measured P_{Limit} for DSI = 1 (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	17.73	17.70	**18.12**	0	0
	1	50	17.56	17.82	17.69		0
	1	99	17.73	17.56	17.73		0
	50	0	17.62	17.68	17.71	0-1	0
	50	25	17.69	17.73	**17.88**		0
	50	50	17.78	17.79	17.86		0
	100	0	17.72	17.75	17.81		0
16QAM	1	0	17.80	18.09	17.83	0-1	0
	1	50	17.90	18.06	17.99		0
	1	99	17.82	17.83	17.91		0
	50	0	17.63	17.67	17.84	0-2	0
	50	25	17.74	17.76	17.85		0
	50	50	17.78	17.74	17.84		0
	100	0	17.68	17.75	17.93		0
64QAM	1	0	17.70	17.68	17.82	0-2	0
	1	50	17.87	17.95	17.72		0
	1	99	17.92	17.70	17.99		0
	50	0	17.64	17.79	17.72	0-3	0
	50	25	17.68	17.71	17.89		0
	50	50	17.80	17.84	17.94		0
	100	0	17.59	17.76	17.79		0
256QAM	1	0	17.62	17.78	17.76	0-5	0
	1	50	17.80	17.92	17.77		0
	1	99	17.75	17.85	17.22		0
	50	0	17.53	17.70	17.75		0
	50	25	17.72	17.80	17.93		0
	50	50	17.68	17.73	17.57		0
	100	0	17.70	17.77	17.86		0

10.3.6 LTE Band 41

Table 10-26
LTE Band 41 PC3 Ant B Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	22.04	21.86	21.93	21.94	21.73	0	0
	1	50	22.05	21.82	22.06	22.05	21.81		0
	1	99	**22.07**	21.80	22.00	21.99	21.61		0
	50	0	22.13	21.92	22.08	22.11	21.85	0-1	0
	50	25	22.15	21.91	22.13	22.10	21.85		0
	50	50	**22.16**	21.88	22.08	22.12	21.73		0
	100	0	22.03	21.91	22.00	22.01	21.84		0
16QAM	1	0	21.99	22.06	21.99	21.91	21.86	0-1	0
	1	50	22.02	21.90	22.07	22.09	21.92		0
	1	99	22.03	21.84	22.08	21.94	21.63		0
	50	0	21.93	21.74	21.86	21.92	21.63	0-2	0
	50	25	21.93	21.72	21.90	21.96	21.69		0
	50	50	21.84	21.68	21.93	21.90	21.54		0
	100	0	21.81	21.68	21.91	21.91	21.62		0
64QAM	1	0	21.84	21.69	21.78	21.70	21.53	0-2	0
	1	50	21.87	21.63	21.87	21.90	21.65		0
	1	99	21.86	21.53	21.69	21.71	21.50		0
	50	0	20.94	20.71	20.86	20.91	20.68	0-3	0.5
	50	25	20.94	20.73	20.89	20.97	20.67		0.5
	50	50	20.84	20.68	20.96	20.90	20.53		0.5
	100	0	20.82	20.68	20.87	20.90	20.64		0.5
256QAM	1	0	18.70	18.62	18.78	18.78	18.60	0-5	2.5
	1	50	18.73	18.69	18.85	18.81	18.59		2.5
	1	99	18.78	18.65	18.82	18.75	18.51		2.5
	50	0	18.88	18.70	18.86	18.90	18.65		2.5
	50	25	18.92	18.71	18.89	18.92	18.63		2.5
	50	50	18.80	18.68	18.93	18.93	18.50		2.5
	100	0	18.83	18.68	18.84	18.85	18.61		2.5

Table 10-27
LTE Band 41 PC2 Ant B Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	23.63	23.56	23.68	23.62	23.34	0	0
	1	50	23.67	23.44	23.59	23.70	23.42		0
	1	99	**23.90**	23.42	23.56	23.54	23.25		0
	50	0	23.78	23.55	23.71	23.73	23.47	0-1	0
	50	25	23.81	23.56	23.77	23.77	23.50		0
	50	50	**23.85**	23.50	23.81	23.77	23.32		0
	100	0	23.71	23.54	23.50	23.70	23.47		0

Table 10-28
LTE Band 41 PC3 Ant B Measured P_{Max} for DSI = 1 (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	23.85	23.68	23.75	23.80	23.64	0	0
	1	50	23.86	23.68	23.78	23.82	23.71		0
	1	99	23.87	23.64	**23.88**	23.84	23.39		0
	50	0	22.94	22.71	22.90	22.95	22.67	0-1	1
	50	25	22.99	22.74	22.95	22.91	22.70		1
	50	50	23.00	22.72	**23.01**	22.99	22.54		1
	100	0	22.85	22.70	22.91	22.93	22.63		1
16QAM	1	0	22.92	22.83	22.84	22.75	22.70	0-1	1
	1	50	22.79	22.85	23.00	22.76	22.71		1
	1	99	22.73	22.75	22.91	22.87	22.65		1
	50	0	21.94	21.73	21.88	21.93	21.65	0-2	2
	50	25	21.96	21.73	21.91	21.97	21.66		2
	50	50	21.86	21.71	21.98	21.95	21.53		2
	100	0	21.81	21.68	21.88	21.91	21.62		2
64QAM	1	0	21.75	21.71	21.64	21.75	21.64	0-2	2
	1	50	21.85	21.72	21.90	21.92	21.59		2
	1	99	21.77	21.61	21.88	21.71	21.47		2
	50	0	20.93	20.71	20.88	20.87	20.66	0-3	3
	50	25	20.94	20.72	20.95	20.93	20.66		3
	50	50	20.85	20.70	20.98	20.90	20.51		3
	100	0	20.83	20.69	20.86	20.89	20.62		3
256QAM	1	0	18.70	18.55	18.60	18.77	18.64	0-5	5
	1	50	18.89	18.66	19.00	18.87	18.63		5
	1	99	18.69	18.52	18.79	18.96	18.36		5
	50	0	18.88	18.69	18.85	18.89	18.60		5
	50	25	18.91	18.71	18.90	18.93	18.63		5
	50	50	18.80	18.69	18.93	18.93	18.50		5
	100	0	18.79	18.66	18.86	18.88	18.60		5

Table 10-29
LTE Band 41 PC2 Ant B Measured P_{Max} for DSI = 1 (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	24.51	24.60	24.79	24.67	24.50	0	0
	1	50	24.71	24.60	24.74	24.69	24.48		0
	1	99	24.77	24.58	**24.81**	24.74	24.37		0
	50	0	23.79	23.66	23.83	23.80	23.62	0-1	1
	50	25	23.80	23.65	23.80	23.81	23.59		1
	50	50	23.81	23.62	**23.89**	23.79	23.49		1
	100	0	23.88	23.64	23.86	23.86	23.56		1

Table 10-30
LTE Band 41 PC3 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	20.97	20.56	20.46	20.38	20.27	0	0
	1	50	**21.01**	20.49	20.53	20.54	20.37		0
	1	99	20.89	20.44	20.44	20.40	20.24		0
	50	0	**21.05**	20.58	20.49	20.52	20.44	0-1	0
	50	25	20.97	20.56	20.57	20.56	20.48		0
	50	50	20.97	20.44	20.62	20.56	20.43		0
	100	0	20.91	20.53	20.53	20.55	20.42		0
16QAM	1	0	20.99	20.49	20.40	20.32	20.40	0-1	0
	1	50	20.89	20.49	20.60	20.51	20.49		0
	1	99	20.94	20.41	20.48	20.35	20.30		0
	50	0	20.95	20.53	20.49	20.48	20.38	0-2	0
	50	25	21.01	20.50	20.53	20.52	20.44		0
	50	50	20.94	20.37	20.55	20.52	20.43		0
	100	0	20.92	20.50	20.47	20.48	20.43		0
64QAM	1	0	20.64	20.54	20.37	20.34	20.30	0-2	0
	1	50	20.86	20.56	20.42	20.38	20.40		0
	1	99	20.81	20.47	20.41	20.32	20.20		0
	50	0	19.95	19.57	19.49	19.49	19.40	0-3	1
	50	25	19.91	19.54	19.54	19.55	19.42		1
	50	50	19.96	19.37	19.58	19.54	19.43		1
	100	0	19.95	19.51	19.49	19.52	19.38		1
256QAM	1	0	17.65	17.54	17.32	17.32	17.33	0-5	3
	1	50	17.92	17.49	17.53	17.53	17.29		3
	1	99	17.64	17.37	17.45	17.40	17.28		3
	50	0	17.92	17.49	17.48	17.51	17.41		3
	50	25	17.94	17.55	17.55	17.54	17.43		3
	50	50	17.86	17.39	17.56	17.53	17.40		3
	100	0	17.90	17.49	17.51	17.51	17.42		3

Table 10-31
LTE Band 41 PC2 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	22.63	22.21	22.17	22.17	21.92	0	0
	1	50	**22.73**	22.15	22.19	22.20	22.06		0
	1	99	22.61	22.13	22.16	22.17	21.88		0
	50	0	**22.61**	22.24	22.21	22.19	22.11	0-1	0
	50	25	22.51	22.27	22.28	22.25	22.14		0
	50	50	22.52	22.07	22.35	22.24	22.07		0
	100	0	22.60	22.20	22.20	22.18	22.10		0

Table 10-32
LTE Band 41 PC3 Ant F Measured P_{Limit} for DSI = 1 (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	16.43	16.07	15.90	15.88	15.88	0	0
	1	50	**16.44**	16.05	16.13	15.98	15.95		0
	1	99	16.33	15.95	15.94	15.88	15.88		0
	50	0	**16.55**	16.11	16.09	16.05	16.03	0-1	0
	50	25	16.46	16.09	16.04	16.11	16.08		0
	50	50	16.43	16.00	16.03	16.07	16.03		0
	100	0	16.41	16.07	16.01	16.05	16.00		0
16QAM	1	0	16.41	16.20	16.10	15.91	15.87	0-1	0
	1	50	16.44	16.12	16.26	16.01	15.85		0
	1	99	16.34	16.01	16.05	15.90	15.92		0
	50	0	16.53	16.11	16.03	16.05	16.03	0-2	0
	50	25	16.49	16.07	16.04	16.09	16.08		0
	50	50	16.40	15.95	16.07	16.07	16.02		0
	100	0	16.41	16.05	16.04	16.06	16.02		0
64QAM	1	0	16.42	16.02	15.95	15.82	15.86	0-2	0
	1	50	16.48	15.96	16.01	15.94	15.96		0
	1	99	16.27	15.90	15.99	15.83	15.83		0
	50	0	16.52	16.10	16.02	16.03	15.99	0-3	0
	50	25	16.49	16.09	16.04	16.10	16.05		0
	50	50	16.44	15.98	16.03	16.04	16.02		0
	100	0	16.42	16.03	16.02	16.06	16.01		0
256QAM	1	0	16.44	16.01	15.88	15.97	15.92	0-5	0
	1	50	16.42	16.09	16.23	15.91	15.95		0
	1	99	16.30	15.80	15.84	15.83	15.85		0
	50	0	16.49	16.05	16.05	16.04	16.03		0
	50	25	16.51	16.04	16.03	16.11	16.04		0
	50	50	16.43	15.93	16.09	16.06	16.00		0
	100	0	16.40	16.02	16.05	16.08	16.00		0

Table 10-33
LTE Band 41 PC2 Ant F Measured P_{Limit} for DSI = 1 (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	18.18	17.76	17.58	17.61	17.54	0	0
	1	50	**18.25**	17.68	17.71	17.70	17.61		0
	1	99	18.11	17.50	17.68	17.71	17.46		0
	50	0	**18.23**	17.79	17.74	17.74	17.70	0-1	0
	50	25	18.18	17.77	17.73	17.78	17.72		0
	50	50	18.13	17.64	17.67	17.76	17.66		0
	100	0	18.13	17.74	17.72	17.73	17.68		0

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 was 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 n5

Table 10-34
NR Band n5 Ant A Measured P_{Limit} for all DSI - 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	**23.43**	0	0.0
	1	53	23.16		0.0
	1	104	23.42		0.0
	50	0	22.45	0-1	0.0
	50	28	**23.39**	0	0.0
	50	56	22.46	0-1	0.0
	100	0	22.51		0.0
DFT-s-OFDM 16QAM	1	1	22.49	0-1	0.0
CP-OFDM QPSK	1	1	22.09	0-1.5	0.5

Table 10-35
NR Band n5 Ant E Measured P_{Max} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**23.15**	0	0.0
	1	53	23.00		0.0
	1	104	22.77		0.0
	50	0	22.20	0-1	0.0
	50	28	**23.08**	0	0.0
	50	56	22.21	0-1	0.0
	100	0	22.17		0.0
DFT-s-OFDM 16QAM	1	1	22.18	0-1	0.0
CP-OFDM QPSK	1	1	21.82	0-1.5	0.5

Table 10-36
NR Band n5 Ant E Measured P_{Limit} for DSI = 1 (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	20.10	0	0.0
	1	53	**20.15**		0.0
	1	104	20.09		0.0
	50	0	20.06	0-1	0.0
	50	28	20.08	0	0.0
	50	56	**20.14**	0-1	0.0
	100	0	20.08		0.0
DFT-s-OFDM 16QAM	1	1	20.05	0-1	0.0
CP-OFDM QPSK	1	1	20.25	0-1.5	0.0

10.4.2 NR Band n66

Table 10-37
NR Band n66 Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 45 MHz Bandwidth

NR Band n66 45 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	**18.44**	0	0.0
	1	121	18.22		0.0
	1	240	18.24		0.0
	120	0	**18.25**	0-1	0.0
	120	61	18.24	0	0.0
	120	122	18.15	0-1	0.0
	240	0	18.18		0.0
DFT-s-OFDM 16QAM	1	1	18.23	0-1	0.0
CP-OFDM QPSK	1	1	18.54	0-1.5	0.0

Table 10-38
NR Band n66 Ant A Measured P_{Max} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n66 45 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	**23.46**	0	0.0
	1	121	23.32		0.0
	1	240	23.03		0.0
	120	0	22.31	0-1	0.5
	120	61	**23.25**	0	0.0
	120	122	22.17	0-1	0.5
	240	0	22.24		0.5
DFT-s-OFDM 16QAM	1	1	22.25	0-1	0.5
CP-OFDM QPSK	1	1	22.03	0-1.5	1.0

Table 10-39
NR Band n66 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 40 MHz Bandwidth

NR Band n66 45 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	**19.76**	0	0.0
	1	121	19.73		0.0
	1	240	19.69		0.0
	120	0	19.62	0-1	0.0
	120	61	**19.77**	0	0.0
	120	122	19.62	0-1	0.0
	240	0	19.64		0.0
DFT-s-OFDM 16QAM	1	1	19.50	0-1	0.0
CP-OFDM QPSK	1	1	19.72	0-1.5	0.0

Table 10-40
NR Band n66 Ant F Measured P_{Limit} for DSI = 1 (Head) - 40 MHz Bandwidth

NR Band n66 45 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	17.62	0	0.0
	1	121	17.73		0.0
	1	240	**17.75**		0.0
	120	0	**17.69**	0-1	0.0
	120	61	17.64	0	0.0
	120	122	17.59	0-1	0.0
	240	0	17.62		0.0
DFT-s-OFDM 16QAM	1	1	17.61	0-1	0.0
CP-OFDM QPSK	1	1	17.75	0-1.5	0.0

10.4.3 NR Band n25

Table 10-41
NR Band n25 Ant A Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	17.58	0	0.0
	1	108	17.36		0.0
	1	214	**17.64**		0.0
	108	0	17.43	0-1	0.0
	108	54	**17.49**	0	0.0
	108	108	17.39	0-1	0.0
	216	0	17.48		0.0
DFT-s-OFDM 16QAM	1	1	17.53	0-1	0.0
CP-OFDM QPSK	1	1	17.66	0-1.5	0.0

Table 10-42
NR Band n25 Ant A 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	22.63	0	0.0
	1	108	22.58		0.0
	1	214	**22.74**		0.0
	108	0	21.57	0-1	1.0
	108	54	**22.66**	0	0.0
	108	108	21.55	0-1	1.0
	216	0	21.53		1.0
DFT-s-OFDM 16QAM	1	1	21.52	0-1	1.0
CP-OFDM QPSK	1	1	21.21	0-1.5	1.5

Table 10-43
NR Band n25 Ant F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**20.04**	0	0.0
	1	108	19.92		0.0
	1	214	19.82		0.0
	108	0	19.89	0-1	0.0
	108	54	**19.98**	0	0.0
	108	108	19.75	0-1	0.0
	216	0	19.94		0.0
DFT-s-OFDM 16QAM	1	1	19.93	0-1	0.0
CP-OFDM QPSK	1	1	20.13	0-1.5	0.0

Table 10-44
NR Band n25 Ant F Measured P_{Limit} 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	**17.87**	0	0.0
	1	108	17.75		0.0
	1	214	17.61		0.0
	108	0	17.79	0-1	0.0
	108	54	**17.83**	0	0.0
	108	108	17.71	0-1	0.0
	216	0	17.82		0.0
DFT-s-OFDM 16QAM	1	1	17.79	0-1	0.0
CP-OFDM QPSK	1	1	17.97	0-1.5	0.0

10.4.4 NR Band n41

Table 10-45
NR Band n41 PC2 Antenna F Path 1 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**17.04**	0	0.0
	1	137	17.01		0.0
	1	271	17.00		0.0
	135	0	17.04	0-1	0.0
	135	69	**17.06**	0	0.0
	135	138	16.99	0-1	0.0
	270	0	16.98		0.0
DFT-s-OFDM 16QAM	1	1	16.87	0-1	0.0
CP-OFDM QPSK	1	1	17.03	0-1.5	0.0

Table 10-46
NR Band n41 PC2 Antenna F Path 1 Measured P_{Limit} for DSI = 1 (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	**16.58**	0	0.0
	1	137	16.52		0.0
	1	271	16.55		0.0
	135	0	16.43	0-1	0.0
	135	69	**16.52**	0	0.0
	135	138	16.49	0-1	0.0
	270	0	16.50		0.0
DFT-s-OFDM 16QAM	1	1	16.37	0-1	0.0
CP-OFDM QPSK	1	1	16.51	0-1.5	0.0

Table 10-47
NR Band n41 PC2 Antenna B & E & D Path 1 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	14.77
SRS #3 Ant E	14.18
SRS #4 Ant D	13.76

Table 10-48
NR Band n41 PC2 Antenna B & E & D Path 1 Measured P_{Limit} for DSI = 1 (Head) - 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	14.24
SRS #3 Ant E	13.67
SRS #4 Ant D	13.27

Table 10-49
NR Band n41 PC2 Antenna B Path 2 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	14.13	0	0.0
	1	137	**14.46**		0.0
	1	271	14.41		0.0
	135	0	14.23	0-1	0.0
	135	69	14.38	0	0.0
	135	138	**14.44**	0-1	0.0
	270	0	14.36		0.0
DFT-s-OFDM 16QAM	1	1	14.14	0-1	0.0
CP-OFDM QPSK	1	1	14.30	0-1.5	0.0

Table 10-50
NR Band n41 PC2 Antenna B Path 2 Measured P_{Limit} for DSI = 1 (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	13.52	0	0.0
	1	137	**13.92**		0.0
	1	271	13.86		0.0
	135	0	13.70	0-1	0.0
	135	69	13.81	0	0.0
	135	138	**13.90**	0-1	0.0
	270	0	13.81		0.0
DFT-s-OFDM 16QAM	1	1	13.62	0-1	0.0
CP-OFDM QPSK	1	1	13.67	0-1.5	0.0

Table 10-51
NR Band n41 PC2 Antenna F & E & D Path 2 Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant F	18.77
SRS #3 Ant E	14.03
SRS #4 Ant D	13.87

Table 10-52
NR Band n41 PC2 Antenna F & E & D Path 2 Measured P_{Limit} for DSI = 1 (Head)

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant F	18.26
SRS #3 Ant E	13.48
SRS #4 Ant D	13.35

10.4.5 NR Band n77

Table 10-53
NR Band n77 DoD Antenna F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	**17.34**	0	0.0
	1	137	17.06		0.0
	1	271	17.24		0.0
	135	0	**17.22**	0-1	0.0
	135	69	17.14	0	0.0
	135	138	17.15	0-1	0.0
	270	0	17.18		0.0
DFT-s-OFDM 16QAM	1	1	17.12	0-1	0.0
CP-OFDM QPSK	1	1	17.19	0-1.5	0.0

Table 10-54
NR Band n77 DoD Antenna F Measured P_{Limit} for DSI = 1 (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	**16.32**	0	0.0
	1	137	16.09		0.0
	1	271	16.20		0.0
	135	0	**16.25**	0-1	0.0
	135	69	16.10	0	0.0
	135	138	16.11	0-1	0.0
	270	0	16.15		0.0
DFT-s-OFDM 16QAM	1	1	16.06	0-1	0.0
CP-OFDM QPSK	1	1	16.20	0-1.5	0.0

Table 10-55
NR Band n77 DoD Antenna C & I, & D Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant C	12.38
SRS #3 Ant I	15.91
SRS #4 Ant D	12.31

Table 10-56
NR Band n77 DoD Antenna C & I, & D Measured P_{Limit} for DSI = 1 (Head) - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth	
	Channel
Antenna	633334 (3500.01 MHz)
	Conducted Power [dBm]
SRS #2 Ant C	11.38
SRS #3 Ant I	14.92
SRS #4 Ant D	11.29

Table 10-57
NR Band n77 Antenna F Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 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	16.53	**17.54**	0	0.0
	1	137	16.66	17.33		0.0
	1	271	17.12	17.21		0.0
	135	0	16.52	**17.38**	0-1	0.0
	135	69	16.58	17.36	0	0.0
	135	138	16.73	17.27	0-1	0.0
	270	0	16.61	17.33		0.0
DFT-s-OFDM 16QAM	1	1	16.63	17.33	0-1	0.0
CP-OFDM QPSK	1	1	16.69	17.37	0-1.5	0.0

Table 10-58
NR Band n77 Antenna F Measured P_{Limit} for DSI = 1 (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	15.61	**16.56**	0	0.0
	1	137	15.56	16.27		0.0
	1	271	15.97	16.19		0.0
	135	0	15.50	**16.41**	0-1	0.0
	135	69	15.59	16.30	0	0.0
	135	138	15.70	16.25	0-1	0.0
	270	0	15.65	16.30		0.0
DFT-s-OFDM 16QAM	1	1	15.61	16.34	0-1	0.0
CP-OFDM QPSK	1	1	15.69	16.37	0-1.5	0.0

Table 10-59
NR Band n77 Antenna C & I, & D Measured P_{Limit} for DSI = 0 (Body-worn, Hotspot or Phablet) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant C	11.57	**12.47**
SRS #3 Ant I	15.37	**15.68**
SRS #4 Ant D	11.54	**11.93**

Table 10-60
NR Band n77 Antenna C & I, & D Measured P_{Limit} for DSI = 1 (Head) - 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #2 Ant C	10.49	**11.46**
SRS #3 Ant I	14.32	**14.72**
SRS #4 Ant D	10.49	**10.92**

Figure 10-4
Power Measurement Setup – NR FDD

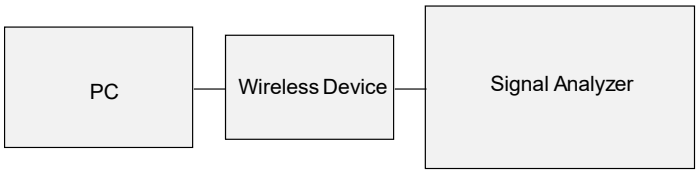

Figure 10-5
Power Measurement Setup – NR TDD

10.5 WLAN Conducted Powers

Table 10-61
2.4 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant H

2.4GHz WIFI (20MHz 802.11b SISO ANT H)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	12.69
2437	6		12.87
2462	11		12.84

Table 10-62
2.4 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant J

2.4GHz WIFI (20MHz 802.11b SISO ANTJ)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	12.93
2437	6		13.53
2462	11		12.98

Table 10-63
2.4 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT H	ANT J	MIMO
2	1	Average	12.68	13.03	15.86
37	6		12.93	13.46	16.21
62	11		12.83	13.05	15.95

Table 10-64
2.4 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant H

2.4GHz WIFI (20MHz 802.11b SISO ANT H)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
2412	1	Average	18.90
2437	6		19.12
2462	11		19.03

Table 10-65
2.4 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant J

2.4GHz WIFI (20MHz 802.11b SISO ANT J)			
Freq. [MHz]	Channel	Detector	Conducted Power [dBm]
	1	Average	19.06
	6		19.60
	11		19.16

Table 10-66
2.4 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – MIMO

2.4GHz WIFI (20MHz 802.11b MIMO)					
Freq [MHz]	Channel	Detector	Conducted Power [dBm]		
			ANT H	ANT J	MIMO
2412	1	Average	18.72	18.98	21.86
2437	6		18.98	19.54	22.28
2462	11		18.93	19.05	22.00

Table 10-67
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant H

5GHz WIFI (40MHz 802.11n SISO ANT H)			
Band	**Freq. [MHz]**	**Channel**	**Avg. Conducted Power [dBm]**
UNII-1	5190	38	13.65
	5230	46	13.52
UNII-2A	5270	54	13.28
	5310	62	13.24
UNII-2C	5510	102	13.18
	5590	118	13.04
	5630	126	13.01
	5710	142	13.35
UNII-3	5755	151	13.40
	5795	159	13.53
UNII-4	5835	167	13.52
	5875	175	13.35

5GHz WIFI (80MHz 802.11ac SISO ANT H)			
Band	**Freq. [MHz]**	**Channel**	**Avg. Conducted Power [dBm]**
UNII-1	5210	42	11.11
UNII-2A	5290	58	11.69
UNII-2C	5530	106	10.30
	5610	122	12.11
	5690	138	12.28
UNII-3	5775	155	12.32
UNII-4	5885	171	12.20

Table 10-68
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant E

5GHz WIFI (40MHz 802.11n SISO ANT E)			
Band	**Freq. [MHz]**	**Channel**	**Avg. Conducted Power [dBm]**
UNII-1	190	38	13.53
	230	46	13.66
UNII-2A	270	54	13.74
	310	62	13.86
UNII-2C	510	102	13.29
	590	118	13.37
	630	126	12.90
	710	142	13.19
UNII-3	755	151	13.41
	795	159	13.50
UNII-4	835	167	13.56
	875	175	13.95

5GHz WIFI (80MHz 802.11ac SISO ANT E)			
Band	**Freq. [MHz]**	**Channel**	**Avg. Conducted Power [dBm]**
UNII-1	5210	42	11.06
UNII-2A	5290	58	12.34
UNII-2C	5530	106	10.78
	5610	122	12.79
	5690	138	12.61
UNII-3	5775	155	12.86
UNII-4	5885	171	13.03

Table 10-69
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – MIMO

5GHz WIFI (40MHz 802.11n MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT1	ANT2	MIMO
UNII-1	5190	38	13.72	13.45	16.60
	5230	46	13.51	13.67	16.60
UNII-2A	5270	54	13.43	13.69	16.57
	5310	62	13.17	13.76	16.49
UNII-2C	5510	102	12.13	13.43	15.84
	5590	118	12.34	13.53	15.99
	5630	126	12.40	13.00	15.72
	5710	142	12.82	13.21	16.03
UNII-3	5755	151	12.60	13.42	16.04
	5795	159	12.62	13.53	16.11
UNII-4	5835	167	12.82	13.65	16.27
	5875	175	13.16	13.92	16.57

5GHz WIFI (80MHz 802.11ac MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT H	ANT E	MIMO
	5210	42	11.46	11.05	14.27
	5290	58	12.00	12.21	15.12
UNII-2C	5530	106	10.48	10.71	13.61
	5610	122	12.44	13.20	15.85
	5690	138	12.76	13.62	16.22
	5775	155	12.26	12.89	15.60
	5885	171	12.64	13.01	15.84

Table 10-70
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant H

5GHz WIFI (20MHz 802.11a SISO ANT H			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.31
	5200	40	16.34
	5220	44	16.26
	5240	48	16.29
UNII-2A	5260	52	16.28
	5280	56	16.38
	5300	60	16.21
	5320	64	16.23
UNII-2C	5500	100	16.24
	5600	120	16.35
	5620	124	16.39
	5720	144	16.37
UNII-3	5745	149	16.39
	5785	157	16.48
	5825	165	16.14
UNII-4	5845	169	16.31
	5865	173	16.38
	5885	177	16.22

Table 10-71
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant E

5GHz WIFI (20MHz 802.11a SISO ANT E			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-1	5180	36	16.49
	5200	40	16.44
	5220	44	16.59
	5240	48	16.58
UNII-2A	5260	52	16.39
	5280	56	16.47
	5300	60	16.58
	5320	64	16.45
UNII-2C	5500	100	16.73
	5600	120	16.42
	5620	124	16.42
	5720	144	16.72
UNII-3	5745	149	16.54
	5785	157	16.63
	5825	165	16.76
UNII-4	5845	169	16.73
	5865	173	16.70
	5885	177	16.91

Table 10-72
5 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – MIMO

5GHz WIFI (20MHz 802.11a MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT H	ANT E	MIMO
UNII-1	5180	36	16.32	16.73	19.54
	5200	40	16.34	16.86	19.62
	5220	44	16.27	16.93	19.62
	5240	48	16.27	16.87	19.59
UNII-2A	5260	52	16.33	16.73	19.55
	5280	56	16.30	16.80	19.57
	5300	60	16.11	16.96	19.57
	5320	64	16.22	16.75	19.50
UNII-2C	5500	100	16.01	16.65	19.35
	5600	120	16.11	16.98	19.58
	5620	124	16.07	16.96	19.55
	5720	144	16.05	16.78	19.44
UNII-3	5745	149	16.04	16.77	19.43
	5785	157	16.16	16.88	19.55
	5825	165	16.54	16.94	19.76
UNII-4	5845	169	16.17	16.89	19.55
	5865	173	16.01	16.81	19.44
	5885	177	16.03	16.91	19.51

Table 10-73
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant H

6GHz WIFI (80MHz 802.11ax SISO ANT H)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	5985	7	8.50
	6305	71	8.20
UNII-6	6465	103	8.26
UNII-7	6705	151	8.22
UNII-8	6945	199	8.80
	7025	215	8.70

Table 10-74
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant E

6GHz WIFI (80MHz 802.11ax SISO ANT E)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	5985	7	9.01
	6305	71	9.95
UNII-6	6465	103	9.42
UNII-7	6705	151	9.45
UNII-8	6945	199	9.64
	7025	215	9.80

Table 10-75
6 GHz WLAN Measured P_{Limit} Average RF Power for DSI = 1 (Head) – MIMO

6GHz WIFI (80MHz 802.11ax MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT H	ANT E	MIMO
UNII-5	5985	7	8.30	9.70	12.07
	6305	71	8.01	9.99	12.12
UNII-6	6465	103	8.30	9.98	12.23
UNII-7	6705	151	8.70	9.40	12.07
UNII-8	6945	199	8.70	9.70	12.24
	7025	215	8.45	9.94	12.27

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Table 10-76
6 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn or Phablet) – Ant H

6GHz WIFI (80MHz 802.11ax SISO ANT H)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	5985	7	10.30
	6305	71	10.16
UNII-7	6705	151	10.08

6GHz WIFI (80MHz 802.11ax SISO ANT H)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-6	6465	103	9.33
UNII-8	6945	199	9.95
	7025	215	9.72

Table 10-77
6 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn or Phablet) – Ant E

6GHz WIFI (80MHz 802.11ax SISO ANT E)				6GHz WIFI (80MHz 802.11ax SISO ANT E)			
Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]	Band	Freq. [MHz]	Channel	Avg. Conducted Power [dBm]
UNII-5	5985	7	10.74	UNII-6	6465	103	10.77
	6305	71	11.40	UNII-8	6945	199	10.86
UNII-7	6705	151	11.47		7025	215	10.95

Table 10-78
6 GHz WLAN Measured P_{max} Average RF Power for DSI = 0 (Body-worn or Phablet) – MIMO

6GHz WIFI (80MHz 802.11ax MIMO)						6GHz WIFI (80MHz 802.11ax MIMO)					
Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]			Band	Freq [MHz]	Channel	Avg. Conducted Powers [dBm]		
			ANT H	ANT E	MIMO				ANT H	ANT E	MIMO
UNII-5	5985	7	9.90	11.01	13.50	UNII-6	6465	103	9.10	10.80	13.04
	6305	71	9.56	11.37	13.57	UNII-8	6945	199	9.75	10.91	13.38
UNII-7	6705	151	10.23	11.45	13.89		7025	215	9.50	10.99	13.32

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.

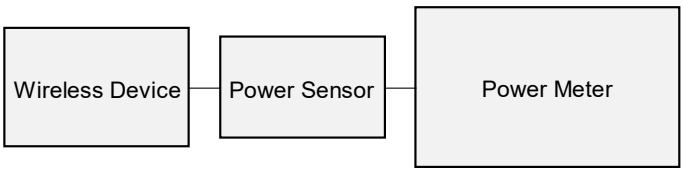


Figure 10-6
Power Measurement Setup

10.6 Bluetooth Conducted Powers

Table 10-79
Bluetooth LE Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant H

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	1 Mbps	0	LE	12.49	17.746
2440	1 Mbps	19	LE	11.82	15.205
2480	1 Mbps	39	LE	11.12	12.942

Table 10-80
Bluetooth LE Measured P_{Limit} Average RF Power for DSI = 1 (Head) – Ant J

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	1 Mbps	0	LE	11.73	14.894
2440	1 Mbps	19	LE	11.37	13.709
2480	1 Mbps	39	LE	11.29	13.459

Table 10-81
Bluetooth LE Measured for P_{Max} Average RF Power for DSI = 0 (Body-worn or Phablet) and P_{Limit} Average RF Power for DSI = 1 (Head) – MIMO

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	ANT1 Peak Conducted Power		ANT2 Peak Conducted Power		Dual Peak Conducted Power	
				[dBm]	[mW]	[dBm]	[mW]	[dBm]	[mW]
2402	1 Mbps	0	LE	12.60	18.197	12.06	16.069	15.35	34.266
2440	1 Mbps	19	LE	11.74	14.928	11.42	13.868	14.59	28.796
2480	1 Mbps	39	LE	11.20	13.183	11.33	13.583	14.28	26.766

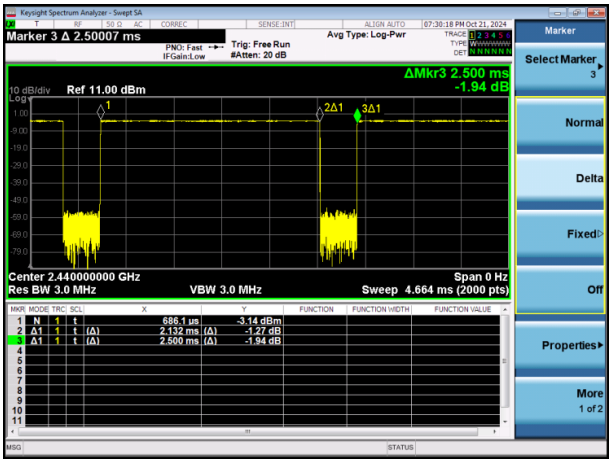
Table 10-82
Bluetooth LE Measured P_{Max} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant H

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	1 Mbps	0	LE	18.46	70.146
2440	1 Mbps	19	LE	17.87	61.235
2480	1 Mbps	39	LE	17.32	53.951

Table 10-83
Bluetooth LE Measured P_{Max} Average RF Power for DSI = 0 (Body-worn, Hotspot or Phablet) – Ant J

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Bluetooth Mode	Peak Conducted Power	
				[dBm]	[mW]
2402	1 Mbps	0	LE	17.20	52.481
2440	1 Mbps	19	LE	18.21	66.252
2480	1 Mbps	39	LE	18.10	64.536

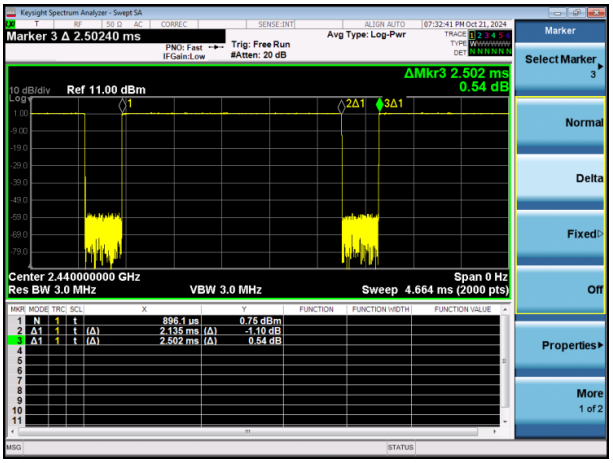
Figure 10-7
Bluetooth LE Antenna H Transmission Plot



Equation 10-1
Bluetooth LE Antenna H Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.119ms}{2.500ms} * 100\% = 85.28\%$$

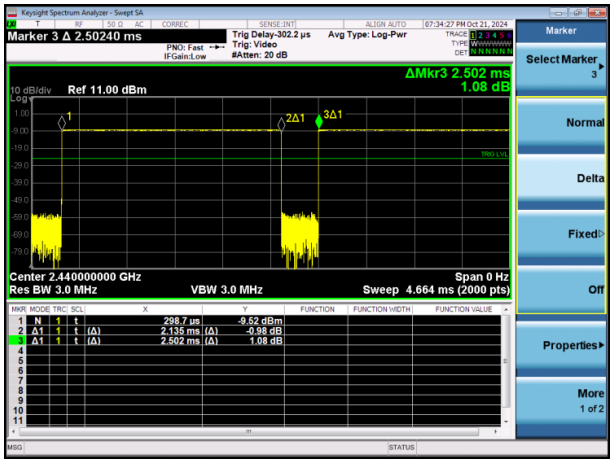
Figure 10-8
Bluetooth LE Antenna J Transmission Plot



Equation 10-2
Bluetooth LE Antenna J Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.117ms}{2.506ms} * 100\% = 85.33\%$$

Figure 10-9
Bluetooth LE MIMO Transmission Plot



Equation 10-3
Bluetooth LE MIMO Duty Cycle Calculation

$$\textbf{\textit{Duty Cycle}} = \frac{\textbf{\textit{Pulse Width}}}{\textbf{\textit{Period}}} * 100\% = \frac{2.115ms}{2.501ms} * 100\% = 85.33\%$$

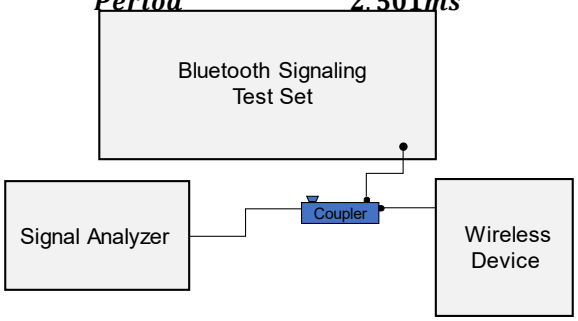


Figure 10-10
Power Measurement Setup

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
10/02/2024	30 Head	24.8	4	0.716	57.318	0.750	55.000	-4.53%	4.21%
			6	0.716	55.954	0.750	55.000	-4.53%	1.73%
			12	0.717	53.466	0.750	55.000	-4.40%	-2.79%
			13	0.717	53.354	0.750	55.000	-4.40%	-2.99%
			14	0.717	53.297	0.750	55.000	-4.40%	-3.10%
			30	0.719	52.625	0.750	55.000	-4.13%	-4.32%
			60	0.722	52.049	0.753	54.325	-4.12%	-4.19%
			65	0.723	51.921	0.753	54.213	-3.98%	-4.23%
			150	0.751	50.187	0.760	52.300	-1.18%	-4.04%
09/16/2024	750 Head	21.5	680	0.876	42.208	0.888	42.305	-1.35%	-0.23%
			695	0.880	42.156	0.889	42.227	-1.01%	-0.17%
			700	0.882	42.143	0.889	42.201	-0.79%	-0.14%
			710	0.885	42.121	0.890	42.149	-0.56%	-0.07%
			725	0.889	42.084	0.891	42.071	-0.22%	0.03%
			750	0.896	42.034	0.894	41.942	0.22%	0.22%
			770	0.901	41.996	0.895	41.838	0.67%	0.38%
			785	0.906	41.965	0.896	41.760	1.12%	0.49%
			800	0.911	41.927	0.897	41.682	1.56%	0.59%
09/18/2024	750 Head	21.6	680	0.876	40.503	0.888	42.305	-1.35%	-4.26%
			695	0.882	40.469	0.889	42.227	-0.79%	-4.16%
			700	0.883	40.456	0.889	42.201	-0.67%	-4.13%
			710	0.887	40.430	0.890	42.149	-0.34%	-4.08%
			725	0.892	40.383	0.891	42.071	0.11%	-4.01%
			750	0.900	40.305	0.894	41.942	0.67%	-3.90%
			770	0.907	40.255	0.895	41.838	1.34%	-3.78%
			785	0.912	40.222	0.896	41.760	1.79%	-3.68%
			800	0.917	40.184	0.897	41.682	2.23%	-3.59%
09/30/2024	750 Head	20.3	680	0.857	42.556	0.888	42.305	-3.49%	0.59%
			695	0.862	42.528	0.889	42.227	-3.04%	0.71%
			700	0.864	42.511	0.889	42.201	-2.81%	0.73%
			710	0.868	42.485	0.890	42.149	-2.47%	0.80%
			725	0.873	42.444	0.891	42.071	-2.02%	0.89%
			750	0.881	42.364	0.894	41.942	-1.45%	1.01%
			770	0.888	42.303	0.895	41.838	-0.78%	1.11%
			785	0.894	42.258	0.896	41.760	-0.22%	1.19%
			800	0.899	42.220	0.897	41.682	0.22%	1.29%
09/08/2024	835 Head	22.6	815	0.924	42.105	0.898	41.594	2.90%	1.23%
			820	0.926	42.091	0.899	41.578	3.00%	1.23%
			835	0.932	42.051	0.900	41.500	3.56%	1.33%
			850	0.937	42.005	0.916	41.500	2.29%	1.22%
09/11/2024	835 Head	22.7	815	0.936	39.873	0.898	41.594	4.23%	-4.14%
			820	0.938	39.863	0.899	41.578	4.34%	-4.12%
			835	0.944	39.833	0.900	41.500	4.89%	-4.02%
			850	0.950	39.790	0.916	41.500	3.71%	-4.12%
09/18/2024	835 Head	21.6	815	0.924	40.144	0.898	41.594	2.90%	-3.49%
			820	0.926	40.129	0.899	41.578	3.00%	-3.49%
			835	0.931	40.085	0.900	41.500	3.44%	-3.41%
			850	0.936	40.037	0.916	41.500	2.18%	-3.53%
09/30/2024	835 Head	20.4	815	0.886	43.236	0.898	41.594	-1.34%	3.95%
			820	0.888	43.217	0.899	41.578	-1.22%	3.94%
			835	0.894	43.165	0.900	41.500	-0.67%	4.01%
			850	0.900	43.119	0.916	41.500	-1.75%	3.90%
10/30/2024	835 Head	21.2	815	0.873	40.385	0.898	41.594	-2.78%	-2.91%
			820	0.875	40.393	0.899	41.578	-2.67%	-2.85%
			835	0.882	40.408	0.900	41.500	-2.00%	-2.63%
			850	0.890	40.422	0.916	41.500	-2.84%	-2.60%
9/25/2024	835 Head	20.6	815	0.894	43.422	0.898	41.594	-0.42%	4.39%
			820	0.896	43.405	0.899	41.578	-0.34%	4.39%
			835	0.901	43.353	0.900	41.500	0.14%	4.47%
			850	0.907	43.307	0.916	41.500	-0.96%	4.35%

Table 11-2
Measured Head Tissue Properties

09/05/2024	1750 Head	21.8	1700	1.331	38.414	1.343	40.145	-0.89%	-4.31%
			1705	1.334	38.409	1.345	40.141	-0.82%	-4.31%
			1710	1.337	38.402	1.348	40.136	-0.82%	-4.32%
			1720	1.342	38.384	1.354	40.126	-0.89%	-4.34%
			1745	1.357	38.319	1.368	40.087	-0.80%	-4.41%
			1750	1.360	38.305	1.371	40.079	-0.80%	-4.43%
			1770	1.371	38.261	1.383	40.047	-0.87%	-4.46%
			1790	1.382	38.239	1.394	40.016	-0.86%	-4.44%
09/08/2024	1750 Head	22.4	1700	1.311	41.172	1.343	40.145	-2.38%	2.56%
			1705	1.314	41.164	1.345	40.141	-2.30%	2.55%
			1710	1.317	41.155	1.348	40.136	-2.30%	2.54%
			1720	1.323	41.135	1.354	40.126	-2.29%	2.51%
			1745	1.338	41.085	1.368	40.087	-2.19%	2.49%
			1750	1.341	41.075	1.371	40.079	-2.19%	2.49%
			1770	1.351	41.042	1.383	40.047	-2.31%	2.48%
			1790	1.362	41.009	1.394	40.016	-2.30%	2.48%
09/09/2024	1750 Head	22.5	1700	1.303	39.131	1.343	40.145	-2.98%	-2.53%
			1705	1.306	39.128	1.345	40.141	-2.90%	-2.52%
			1710	1.308	39.124	1.348	40.136	-2.97%	-2.52%
			1720	1.314	39.121	1.354	40.126	-2.95%	-2.50%
			1745	1.328	39.107	1.368	40.087	-2.92%	-2.44%
			1750	1.331	39.103	1.371	40.079	-2.92%	-2.44%
			1770	1.343	39.075	1.383	40.047	-2.89%	-2.43%
			1790	1.355	39.032	1.394	40.016	-2.80%	-2.46%
09/09/2024	1750 Head	20.7	1700	1.280	40.116	1.343	40.145	-4.69%	-0.07%
			1705	1.283	40.108	1.345	40.141	-4.61%	-0.08%
			1710	1.285	40.100	1.348	40.136	-4.67%	-0.09%
			1720	1.291	40.084	1.354	40.126	-4.65%	-0.10%
			1745	1.305	40.043	1.368	40.087	-4.61%	-0.11%
			1750	1.308	40.035	1.371	40.079	-4.60%	-0.11%
			1770	1.320	40.008	1.383	40.047	-4.56%	-0.10%
			1790	1.331	39.982	1.394	40.016	-4.52%	-0.08%
09/30/2024	1750 Head	21.3	1700	1.312	39.852	1.343	40.145	-2.31%	-0.73%
			1705	1.314	39.843	1.345	40.141	-2.30%	-0.74%
			1710	1.317	39.836	1.348	40.136	-2.30%	-0.75%
			1720	1.323	39.817	1.354	40.126	-2.29%	-0.77%
			1745	1.338	39.773	1.368	40.087	-2.19%	-0.78%
			1750	1.341	39.764	1.371	40.079	-2.19%	-0.79%
			1770	1.351	39.731	1.383	40.047	-2.31%	-0.79%
			1790	1.363	39.700	1.394	40.016	-2.22%	-0.79%
09/05/2024	1900 Head	21.8	1850	1.414	38.151	1.400	40.000	1.00%	-4.62%
			1860	1.420	38.131	1.400	40.000	1.43%	-4.67%
			1880	1.433	38.099	1.400	40.000	2.36%	-4.75%
			1900	1.447	38.079	1.400	40.000	3.36%	-4.80%
			1905	1.450	38.074	1.400	40.000	3.57%	-4.82%
			1910	1.453	38.068	1.400	40.000	3.79%	-4.83%
			1920	1.459	38.056	1.400	40.000	4.21%	-4.86%
09/08/2024	1900 Head	22.4	1850	1.396	40.911	1.400	40.000	-0.29%	2.28%
			1860	1.401	40.898	1.400	40.000	0.07%	2.25%
			1880	1.413	40.868	1.400	40.000	0.93%	2.17%
			1900	1.425	40.838	1.400	40.000	1.79%	2.10%
			1905	1.428	40.831	1.400	40.000	2.00%	2.08%
			1910	1.431	40.823	1.400	40.000	2.21%	2.06%
			1920	1.436	40.808	1.400	40.000	2.57%	2.02%

Table 11-3
Measured Head Tissue Properties

09/09/2024	1900 Head	22.5	1850	1.387	38.942	1.400	40.000	-0.93%	-2.65%
			1860	1.393	38.927	1.400	40.000	-0.50%	-2.68%
			1880	1.404	38.906	1.400	40.000	0.29%	-2.74%
			1900	1.416	38.886	1.400	40.000	1.14%	-2.78%
			1905	1.419	38.882	1.400	40.000	1.36%	-2.80%
			1910	1.422	38.877	1.400	40.000	1.57%	-2.81%
			1920	1.428	38.867	1.400	40.000	2.00%	-2.83%
09/09/2024	1900 Head	20.7	1850	1.365	39.904	1.400	40.000	-2.50%	-0.24%
			1860	1.372	39.889	1.400	40.000	-2.00%	-0.28%
			1880	1.385	39.861	1.400	40.000	-1.07%	-0.35%
			1900	1.398	39.837	1.400	40.000	-0.14%	-0.41%
			1905	1.401	39.833	1.400	40.000	0.07%	-0.42%
			1910	1.404	39.828	1.400	40.000	0.29%	-0.43%
			1920	1.410	39.819	1.400	40.000	0.71%	-0.45%
09/09/2024	1900 Head	21.9	1850	1.364	40.299	1.400	40.000	-2.57%	0.75%
			1860	1.371	40.288	1.400	40.000	-2.07%	0.72%
			1880	1.385	40.276	1.400	40.000	-1.07%	0.69%
			1900	1.397	40.265	1.400	40.000	-0.21%	0.66%
			1905	1.399	40.259	1.400	40.000	-0.07%	0.65%
			1910	1.402	40.253	1.400	40.000	0.14%	0.63%
			1920	1.406	40.235	1.400	40.000	0.43%	0.59%
09/30/2024	1900 Head	21.3	1850	1.400	39.610	1.400	40.000	0.00%	-0.98%
			1860	1.405	39.591	1.400	40.000	0.36%	-1.02%
			1880	1.417	39.557	1.400	40.000	1.21%	-1.11%
			1900	1.429	39.523	1.400	40.000	2.07%	-1.19%
			1905	1.432	39.516	1.400	40.000	2.29%	-1.21%
			1910	1.435	39.508	1.400	40.000	2.50%	-1.23%
			1920	1.441	39.492	1.400	40.000	2.93%	-1.27%
10/02/2024	1900 Head	21.3	1850	1.413	39.394	1.400	40.000	0.93%	-1.52%
			1860	1.419	39.376	1.400	40.000	1.36%	-1.56%
			1880	1.432	39.351	1.400	40.000	2.29%	-1.62%
			1900	1.445	39.331	1.400	40.000	3.21%	-1.67%
			1905	1.449	39.326	1.400	40.000	3.50%	-1.69%
			1910	1.452	39.321	1.400	40.000	3.71%	-1.70%
			1920	1.458	39.308	1.400	40.000	4.14%	-1.73%
10/28/2024	1900 Head	20.4	1850	1.397	40.790	1.400	40.000	-0.21%	1.98%
			1860	1.403	40.783	1.400	40.000	0.21%	1.96%
			1880	1.415	40.765	1.400	40.000	1.07%	1.91%
			1900	1.427	40.744	1.400	40.000	1.93%	1.86%
			1905	1.431	40.737	1.400	40.000	2.21%	1.84%
			1910	1.434	40.730	1.400	40.000	2.43%	1.82%
			1920	1.440	40.718	1.400	40.000	2.86%	1.80%
09/04/2024	2450 Head	21.4	2300	1.670	38.462	1.670	39.500	0.00%	-2.63%
			2310	1.676	38.446	1.679	39.480	-0.18%	-2.62%
			2320	1.683	38.430	1.687	39.460	-0.24%	-2.61%
			2400	1.740	38.337	1.756	39.289	-0.91%	-2.42%
			2450	1.777	38.271	1.800	39.200	-1.28%	-2.37%
			2480	1.801	38.234	1.833	39.162	-1.75%	-2.37%
			2500	1.817	38.204	1.855	39.136	-2.05%	-2.38%
			2510	1.825	38.188	1.866	39.123	-2.20%	-2.39%
			2535	1.844	38.151	1.893	39.092	-2.59%	-2.41%
			2550	1.858	38.131	1.909	39.073	-2.67%	-2.41%
			2560	1.867	38.117	1.920	39.060	-2.76%	-2.41%
			2600	1.898	38.057	1.964	39.009	-3.36%	-2.44%
			2650	1.938	37.975	2.018	38.945	-3.96%	-2.49%
			2680	1.962	37.926	2.051	38.907	-4.34%	-2.52%
			2700	1.976	37.894	2.073	38.882	-4.68%	-2.54%

Table 11-4
Measured Head Tissue Properties

09/30/2024	2450 Head	21.0	2300	1.692	37.988	1.670	39.500	1.32%	-3.83%
			2310	1.700	37.972	1.679	39.480	1.25%	-3.82%
			2320	1.708	37.954	1.687	39.460	1.24%	-3.82%
			2400	1.768	37.832	1.756	39.289	0.68%	-3.71%
			2450	1.807	37.739	1.800	39.200	0.39%	-3.73%
			2480	1.829	37.694	1.833	39.162	-0.22%	-3.75%
			2500	1.844	37.657	1.855	39.136	-0.59%	-3.78%
			2510	1.852	37.637	1.866	39.123	-0.75%	-3.80%
			2535	1.871	37.594	1.893	39.092	-1.16%	-3.83%
			2550	1.883	37.573	1.909	39.073	-1.36%	-3.84%
			2560	1.891	37.561	1.920	39.060	-1.51%	-3.84%
			2600	1.921	37.495	1.964	39.009	-2.19%	-3.88%
			2650	1.961	37.418	2.018	38.945	-2.82%	-3.92%
			2680	1.984	37.370	2.051	38.907	-3.27%	-3.95%
			2700	1.998	37.333	2.073	38.882	-3.62%	-3.98%
09/30/2024	2450 Head	21.0	2300	1.692	37.988	1.670	39.500	1.32%	-3.83%
			2310	1.700	37.972	1.679	39.480	1.25%	-3.82%
			2320	1.708	37.954	1.687	39.460	1.24%	-3.82%
			2400	1.768	37.832	1.756	39.289	0.68%	-3.71%
			2450	1.807	37.739	1.800	39.200	0.39%	-3.73%
			2480	1.829	37.694	1.833	39.162	-0.22%	-3.75%
			2500	1.844	37.657	1.855	39.136	-0.59%	-3.78%
			2510	1.852	37.637	1.866	39.123	-0.75%	-3.80%
			2535	1.871	37.594	1.893	39.092	-1.16%	-3.83%
			2550	1.883	37.573	1.909	39.073	-1.36%	-3.84%
			2560	1.891	37.561	1.920	39.060	-1.51%	-3.84%
			2600	1.921	37.495	1.964	39.009	-2.19%	-3.88%
			2650	1.961	37.418	2.018	38.945	-2.82%	-3.92%
			2680	1.984	37.370	2.051	38.907	-3.27%	-3.95%
			2700	1.998	37.333	2.073	38.882	-3.62%	-3.98%
10/16/2024	2450 Head	20.8	2300	1.690	39.472	1.670	39.500	1.20%	-0.07%
			2310	1.698	39.455	1.679	39.480	1.13%	-0.06%
			2320	1.705	39.438	1.687	39.460	1.07%	-0.06%
			2400	1.773	39.335	1.756	39.289	0.97%	0.12%
			2450	1.817	39.243	1.800	39.200	0.94%	0.11%
			2480	1.844	39.179	1.833	39.162	0.60%	0.04%
			2500	1.861	39.123	1.855	39.136	0.32%	-0.03%
			2510	1.868	39.100	1.866	39.123	0.11%	-0.06%
			2535	1.891	39.060	1.893	39.092	-0.11%	-0.08%
			2550	1.905	39.038	1.909	39.073	-0.21%	-0.09%
			2560	1.915	39.024	1.920	39.060	-0.26%	-0.09%
			2600	1.947	38.944	1.964	39.009	-0.87%	-0.17%
			2650	1.990	38.872	2.018	38.945	-1.39%	-0.19%
			2680	2.016	38.811	2.051	38.907	-1.71%	-0.25%
			2700	2.030	38.780	2.073	38.882	-2.07%	-0.26%
10/28/2024	2450 Head	20.7	2300	1.705	38.207	1.670	39.500	2.10%	-3.27%
			2310	1.713	38.192	1.679	39.480	2.03%	-3.26%
			2320	1.721	38.174	1.687	39.460	2.02%	-3.26%
			2400	1.786	38.051	1.756	39.289	1.71%	-3.15%
			2450	1.828	37.957	1.800	39.200	1.56%	-3.17%
			2480	1.852	37.907	1.833	39.162	1.04%	-3.20%
			2500	1.869	37.861	1.855	39.136	0.75%	-3.26%
			2510	1.877	37.840	1.866	39.123	0.59%	-3.28%
			2535	1.897	37.799	1.893	39.092	0.21%	-3.31%
			2550	1.910	37.778	1.909	39.073	0.05%	-3.31%
			2560	1.918	37.763	1.920	39.060	-0.10%	-3.32%
			2600	1.949	37.692	1.964	39.009	-0.76%	-3.38%
			2650	1.990	37.616	2.018	38.945	-1.39%	-3.41%
			2680	2.015	37.568	2.051	38.907	-1.76%	-3.44%
			2700	2.031	37.526	2.073	38.882	-2.03%	-3.49%

Table 11-5
Measured Head Tissue Properties

			3300	2.590	38.796	2.708	38.157	-4.36%	1.67%
			3350	2.635	38.699	2.759	38.100	-4.49%	1.57%
			3450	2.722	38.511	2.861	37.986	-4.86%	1.38%
			3500	2.769	38.396	2.913	37.929	-4.94%	1.23%
			3550	2.816	38.299	2.964	37.871	-4.99%	1.13%
			3560	2.830	38.283	2.974	37.860	-4.84%	1.12%
			3600	2.870	38.208	3.015	37.814	-4.81%	1.04%
09/04/2024	3600 Head	19.0	3650	2.917	38.159	3.066	37.757	-4.86%	1.06%
			3690	2.958	38.067	3.107	37.711	-4.80%	0.94%
			3700	2.968	38.054	3.117	37.700	-4.78%	0.94%
			3750	3.012	38.006	3.169	37.643	-4.95%	0.96%
			3900	3.163	37.651	3.323	37.471	-4.81%	0.48%
			3930	3.195	37.643	3.353	37.437	-4.71%	0.55%
			4100	3.377	37.403	3.528	37.243	-4.28%	0.43%
			4150	3.422	37.352	3.579	37.186	-4.39%	0.45%
			3300	2.606	38.883	2.708	38.157	-3.77%	1.90%
			3350	2.654	38.818	2.759	38.100	-3.81%	1.88%
			3450	2.745	38.636	2.861	37.986	-4.05%	1.71%
			3500	2.789	38.529	2.913	37.929	-4.26%	1.58%
			3550	2.838	38.446	2.964	37.871	-4.25%	1.52%
			3560	2.846	38.424	2.974	37.860	-4.30%	1.49%
			3600	2.884	38.349	3.015	37.814	-4.34%	1.41%
09/09/2024	3600 Head	21.0	3650	2.933	38.257	3.066	37.757	-4.34%	1.32%
			3690	2.972	38.195	3.107	37.711	-4.35%	1.28%
			3700	2.981	38.179	3.117	37.700	-4.36%	1.27%
			3750	3.029	38.096	3.169	37.643	-4.42%	1.20%
			3900	3.177	37.849	3.323	37.471	-4.39%	1.01%
			3930	3.207	37.785	3.353	37.437	-4.35%	0.93%
			4100	3.391	37.513	3.528	37.243	-3.88%	0.72%
			4150	3.441	37.431	3.579	37.186	-3.86%	0.66%
			5150	4.562	34.739	4.608	36.050	-1.00%	-3.64%
			5160	4.575	34.726	4.618	36.040	-0.93%	-3.65%
			5170	4.588	34.703	4.629	36.030	-0.89%	-3.68%
			5180	4.600	34.679	4.635	36.009	-0.76%	-3.69%
			5190	4.613	34.662	4.645	35.998	-0.69%	-3.71%
			5200	4.625	34.648	4.655	35.986	-0.64%	-3.72%
			5210	4.638	34.625	4.666	35.975	-0.60%	-3.75%
			5220	4.650	34.601	4.676	35.963	-0.56%	-3.79%
			5240	4.674	34.571	4.696	35.940	-0.47%	-3.81%
			5250	4.687	34.557	4.706	35.929	-0.40%	-3.82%
			5260	4.697	34.539	4.717	35.917	-0.42%	-3.84%
			5270	4.707	34.523	4.727	35.906	-0.42%	-3.85%
			5280	4.716	34.501	4.737	35.894	-0.44%	-3.88%
			5290	4.728	34.480	4.748	35.883	-0.42%	-3.91%
			5300	4.743	34.458	4.758	35.871	-0.32%	-3.94%
			5310	4.755	34.441	4.768	35.860	-0.27%	-3.96%
			5320	4.766	34.426	4.778	35.849	-0.25%	-3.97%
			5500	4.956	34.105	4.963	35.643	-0.14%	-4.32%
			5510	4.968	34.076	4.973	35.632	-0.10%	-4.37%
			5520	4.982	34.057	4.983	35.620	-0.02%	-4.39%
			5530	4.998	34.032	4.994	35.609	0.08%	-4.43%
			5540	5.010	34.013	5.004	35.597	0.12%	-4.45%
			5550	5.021	34.003	5.014	35.586	0.14%	-4.45%
			5560	5.033	33.993	5.024	35.574	0.18%	-4.44%
			5580	5.057	33.942	5.045	35.551	0.24%	-4.53%
			5600	5.080	33.886	5.065	35.529	0.30%	-4.62%
			5610	5.096	33.863	5.076	35.518	0.39%	-4.66%
			5620	5.114	33.843	5.086	35.506	0.55%	-4.68%
			5640	5.139	33.819	5.106	35.483	0.65%	-4.69%
10/14/2024	5200-5800 Head	20.8	5660	5.162	33.791	5.127	35.460	0.68%	-4.71%
			5670	5.177	33.768	5.137	35.449	0.78%	-4.74%
			5680	5.192	33.746	5.147	35.437	0.87%	-4.77%
			5690	5.206	33.729	5.158	35.426	0.93%	-4.79%
			5700	5.219	33.717	5.168	35.414	0.99%	-4.79%
			5710	5.230	33.704	5.178	35.403	1.00%	-4.80%
			5720	5.243	33.694	5.188	35.391	1.06%	-4.80%
			5745	5.271	33.653	5.214	35.363	1.09%	-4.84%
			5750	5.277	33.639	5.219	35.357	1.11%	-4.86%
			5755	5.282	33.631	5.224	35.351	1.11%	-4.87%
			5765	5.294	33.620	5.234	35.340	1.15%	-4.87%
			5775	5.305	33.621	5.245	35.329	1.14%	-4.83%
			5785	5.317	33.617	5.255	35.317	1.18%	-4.81%
			5795	5.330	33.602	5.265	35.305	1.23%	-4.82%
			5800	5.336	33.589	5.270	35.300	1.25%	-4.85%
			5800	5.336	33.589	5.270	35.300	1.25%	-4.85%
			5805	5.341	33.576	5.275	35.294	1.25%	-4.87%
			5825	5.364	33.544	5.296	35.271	1.28%	-4.90%
			5835	5.379	33.524	5.305	35.230	1.39%	-4.84%
			5845	5.391	33.505	5.315	35.210	1.43%	-4.84%
			5850	5.394	33.498	5.320	35.200	1.39%	-4.84%
			5855	5.398	33.493	5.325	35.197	1.37%	-4.84%
			5865	5.409	33.491	5.336	35.190	1.37%	-4.83%
			5865	5.409	33.491	5.336	35.190	1.37%	-4.83%
			5865	5.409	33.491	5.336	35.190	1.37%	-4.83%
			5865	5.409	33.491	5.336	35.190	1.37%	-4.83%
			5875	5.422	33.486	5.347	35.183	1.40%	-4.82%
			5885	5.436	33.459	5.357	35.177	1.47%	-4.88%
			5905	5.453	33.409	5.379	35.163	1.38%	-4.99%

Table 11-6
Measured Head Tissue Properties

10/14/2024	6000 Head	19.8	5935	5.355	34.518	5.411	35.143	-1.03%	-1.78%
			5970	5.387	34.462	5.448	35.120	-1.12%	-1.87%
			5985	5.408	34.426	5.464	35.110	-1.02%	-1.95%
			6000	5.433	34.390	5.480	35.100	-0.86%	-2.02%
			6025	5.471	34.341	5.510	35.070	-0.71%	-2.08%
			6065	5.511	34.283	5.557	35.022	-0.83%	-2.11%
			6075	5.523	34.266	5.569	35.010	-0.83%	-2.13%
			6085	5.538	34.246	5.580	34.998	-0.75%	-2.15%
			6185	5.658	34.080	5.698	34.878	-0.70%	-2.29%
			6275	5.772	33.893	5.805	34.770	-0.57%	-2.52%
			6285	5.780	33.874	5.816	34.758	-0.62%	-2.54%
			6305	5.805	33.839	5.840	34.734	-0.60%	-2.58%
			6345	5.858	33.788	5.887	34.686	-0.49%	-2.59%
			6475	6.001	33.575	6.041	34.530	-0.66%	-2.77%
			6485	6.010	33.552	6.052	34.518	-0.69%	-2.80%
			6500	6.029	33.510	6.070	34.500	-0.68%	-2.87%
			6505	6.035	33.497	6.076	34.494	-0.67%	-2.89%
			6545	6.094	33.418	6.122	34.446	-0.46%	-2.98%
			6665	6.240	33.197	6.265	34.302	-0.40%	-3.22%
			6675	6.250	33.195	6.273	34.290	-0.37%	-3.19%
			6685	6.257	33.181	6.285	34.278	-0.45%	-3.20%
			6715	6.275	33.111	6.319	34.242	-0.70%	-3.30%
			6785	6.382	33.025	6.400	34.158	-0.28%	-3.32%
			6825	6.406	32.936	6.447	34.110	-0.64%	-3.44%
			6985	6.613	32.656	6.633	33.918	-0.30%	-3.72%
			7025	6.638	32.633	6.680	33.870	-0.63%	-3.65%
			7500	7.242	31.752	7.240	33.300	0.03%	-4.65%
10/20/2024	6000 Head	21.0	5935	5.313	34.736	5.411	35.143	-1.81%	-1.16%
			5970	5.344	34.681	5.448	35.120	-1.91%	-1.25%
			5985	5.367	34.641	5.464	35.110	-1.78%	-1.34%
			6000	5.402	34.629	5.480	35.100	-1.42%	-1.34%
			6025	5.469	34.661	5.510	35.070	-0.74%	-1.17%
			6065	5.498	34.645	5.557	35.022	-1.06%	-1.08%
			6075	5.500	34.605	5.569	35.010	-1.24%	-1.16%
			6085	5.507	34.558	5.580	34.998	-1.31%	-1.26%
			6185	5.628	34.372	5.698	34.878	-1.23%	-1.45%
			6275	5.747	34.208	5.805	34.770	-1.00%	-1.62%
			6285	5.754	34.187	5.816	34.758	-1.07%	-1.64%
			6305	5.762	34.157	5.840	34.734	-1.34%	-1.66%
			6345	5.822	34.061	5.887	34.686	-1.10%	-1.80%
			6475	5.990	33.844	6.041	34.530	-0.84%	-1.99%
			6485	5.999	33.843	6.052	34.518	-0.88%	-1.96%
			6500	6.006	33.848	6.070	34.500	-1.05%	-1.89%
			6505	6.008	33.840	6.076	34.494	-1.12%	-1.90%
			6545	6.048	33.683	6.122	34.446	-1.21%	-2.22%
			6665	6.196	33.484	6.265	34.302	-1.10%	-2.38%
			6675	6.208	33.435	6.273	34.290	-1.04%	-2.49%
			6685	6.221	33.420	6.285	34.278	-1.02%	-2.50%
			6715	6.269	33.431	6.319	34.242	-0.79%	-2.37%
			6785	6.340	33.221	6.400	34.158	-0.94%	-2.74%
			6825	6.396	33.236	6.447	34.110	-0.79%	-2.56%
			6985	6.553	33.003	6.633	33.918	-1.21%	-2.70%
			6995	6.558	32.963	6.644	33.906	-1.29%	-2.78%
			7000	6.560	32.943	6.650	33.900	-1.35%	-2.82%
			7005	6.563	32.928	6.656	33.894	-1.40%	-2.85%
			7025	6.590	32.867	6.680	33.870	-1.35%	-2.96%
			7500	7.129	32.080	7.240	33.300	-1.53%	-3.66%
			7980	7.732	31.341	7.816	32.724	-1.07%	-4.23%
			8000	7.787	31.449	7.840	32.700	-0.68%	-3.83%

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

SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	DAE	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation 1g (%)	Measured SAR10g (W/kg)	1W Target SAR10g (W/kg)	1W Normalized SAR 10g (W/kg)	Deviation10g (%)	Measured 4cm2 APD (W/m2)	1W Target 4cm2 APD (W/m2)	1W Normalized 4cm2 APD (W/m2)	Deviation 4cm2 APD (%)
AM14	13	HEAD	10-02-2024	21.5	23.0	1.00	1004	7308	534	0.54	0.58	0.54	-6.23%	0.33	0.36	0.33	-6.18%	N/A	N/A	N/A	N/A
AM8	750	HEAD	09-16-2024	20.5	20.6	0.20	1097	7427	467	1.72	8.27	8.60	3.99%	1.14	5.38	5.70	5.95%	N/A	N/A	N/A	N/A
AM4	750	HEAD	09-18-2024	22.0	21.0	0.20	1097	7357	1582	1.73	8.27	8.65	4.59%	1.16	5.38	5.80	7.81%	N/A	N/A	N/A	N/A
AM4	750	HEAD	09-30-2024	22.5	20.3	0.20	1097	7357	1582	1.73	8.27	8.65	4.59%	1.15	5.38	5.75	6.88%	N/A	N/A	N/A	N/A
J	835	HEAD	09-08-2024	23.9	22.6	0.20	4d132	7406	1677	1.97	9.84	9.85	0.10%	1.28	6.40	6.40	0.00%	N/A	N/A	N/A	N/A
J	835	HEAD	09-11-2024	24.0	22.7	0.20	4d132	7406	1677	2.00	9.84	10.00	1.63%	1.30	6.40	6.50	1.56%	N/A	N/A	N/A	N/A
AM4	835	HEAD	09-18-2024	22.0	21.0	0.20	4d108	7357	1582	2.03	9.80	10.15	3.57%	1.34	6.34	6.70	5.68%	N/A	N/A	N/A	N/A
K3	835	HEAD	09-25-2024	21.5	20.5	0.20	4d119	7491	1532	2.05	9.96	10.25	2.91%	1.35	6.48	6.75	4.17%	N/A	N/A	N/A	N/A
K3	835	HEAD	09-30-2024	20.4	20.4	0.20	4d119	7558	1364	1.96	9.96	9.80	-1.61%	1.30	6.48	6.50	0.31%	N/A	N/A	N/A	N/A
K3	835	HEAD	10-30-2024	21.9	20.9	0.20	4d119	7558	1364	2.05	9.96	10.25	2.91%	1.35	6.48	6.75	4.17%	N/A	N/A	N/A	N/A
E	1750	HEAD	09-05-2024	23.4	22.5	0.10	1148	7409	1334	3.73	37.20	37.30	0.27%	2.00	19.40	20.00	3.09%	N/A	N/A	N/A	N/A
S	1750	HEAD	09-08-2024	23.3	22.4	0.10	1150	7803	1583	3.82	36.90	38.20	3.52%	2.08	19.40	20.80	7.22%	N/A	N/A	N/A	N/A
E	1750	HEAD	09-09-2024	24.7	22.2	0.10	1150	7409	1334	3.73	36.90	37.30	1.08%	2.00	19.40	20.00	3.09%	N/A	N/A	N/A	N/A
O	1750	HEAD	09-09-2024	22.0	20.5	0.10	1150	3914	728	3.80	36.90	38.00	2.98%	2.04	19.40	20.40	5.15%	N/A	N/A	N/A	N/A
K4	1750	HEAD	09-30-2024	21.7	21.3	0.10	1051	7565	1466	3.69	37.00	36.90	-0.27%	1.96	19.50	19.60	0.51%	N/A	N/A	N/A	N/A
E	1900	HEAD	09-05-2024	23.4	22.5	0.10	5d080	7409	1334	4.23	39.60	42.30	6.82%	2.21	20.70	22.10	6.76%	N/A	N/A	N/A	N/A
S	1900	HEAD	09-08-2024	23.4	22.4	0.10	5d148	7803	1583	3.92	40.10	39.20	-2.24%	2.06	21.00	20.60	-1.90%	N/A	N/A	N/A	N/A
E	1900	HEAD	09-09-2024	24.7	22.2	0.10	5d149	7409	1334	4.26	39.10	42.60	8.95%	2.21	20.70	22.10	6.76%	N/A	N/A	N/A	N/A
O	1900	HEAD	09-09-2024	22.0	20.5	0.10	5d148	3914	728	4.19	40.10	41.90	4.49%	2.18	21.00	21.80	3.81%	N/A	N/A	N/A	N/A
P	1900	HEAD	09-09-2024	20.3	21.3	0.10	5d148	7718	665	4.11	40.10	41.10	2.49%	2.17	21.00	21.70	3.33%	N/A	N/A	N/A	N/A
K4	1900	HEAD	09-30-2024	22.0	21.3	0.10	5d141	7565	1466	3.91	40.30	39.10	-2.98%	2.02	21.00	20.20	-3.81%	N/A	N/A	N/A	N/A
E	1900	HEAD	10-02-2024	23.5	22.4	0.10	5d148	7409	1334	4.40	40.10	44.00	9.73%	2.28	21.00	22.80	8.57%	N/A	N/A	N/A	N/A
K4	1900	HEAD	10-28-2024	22.6	20.4	0.10	5d141	7565	1466	4.07	40.30	40.70	0.99%	2.10	21.00	21.00	0.00%	N/A	N/A	N/A	N/A
K2	2450	HEAD	09-30-2024	21.0	21.0	0.10	945	7640	1645	5.57	53.40	55.70	4.31%	2.59	25.10	25.90	3.19%	N/A	N/A	N/A	N/A
K3	2450	HEAD	10-16-2024	20.8	20.8	0.10	882	7558	1364	5.66	53.00	56.60	6.79%	2.65	24.90	26.50	6.43%	N/A	N/A	N/A	N/A
K2	2450	HEAD	10-28-2024	20.6	20.7	0.10	945	7640	1645	5.48	53.40	54.80	2.62%	2.55	25.10	25.50	1.59%	N/A	N/A	N/A	N/A
K2	2600	HEAD	09-04-2024	20.9	21.4	0.10	1009	7637	1652	5.23	56.60	52.30	-7.60%	2.36	25.50	23.60	-7.45%	N/A	N/A	N/A	N/A
K2	2600	HEAD	09-30-2024	21.0	21.0	0.10	1009	7640	1645	5.57	56.60	55.70	-1.59%	2.51	25.50	25.10	-1.57%	N/A	N/A	N/A	N/A
K4	3500	HEAD	09-04-2024	20.4	20.0	0.10	1068	7565	1466	6.19	65.30	61.90	-5.21%	2.35	24.70	23.50	-4.86%	N/A	N/A	N/A	N/A
K4	3500	HEAD	09-09-2024	22.2	21.0	0.10	1127	7565	1466	6.24	65.60	62.40	-4.88%	2.38	24.80	23.80	-4.03%	N/A	N/A	N/A	N/A
K4	3700	HEAD	09-04-2024	20.4	20.0	0.10	1029	7565	1466	6.40	67.30	64.00	-4.90%	2.36	24.50	23.60	-3.67%	N/A	N/A	N/A	N/A
K4	3700	HEAD	09-09-2024	22.2	21.0	0.10	1096	7565	1466	6.63	67.60	66.30	-1.92%	2.46	24.70	24.60	-0.40%	N/A	N/A	N/A	N/A
K4	3900	HEAD	09-04-2024	20.4	20.0	0.10	1074	7565	1466	6.75	68.70	67.50	-1.75%	2.38	24.00	23.80	-0.83%	N/A	N/A	N/A	N/A
K4	3900	HEAD	09-09-2024	22.2	21.0	0.10	1074	7565	1466	6.64	68.70	66.40	-3.35%	2.35	24.00	23.50	-2.08%	N/A	N/A	N/A	N/A
K6	5250	HEAD	10-14-2024	20.8	20.8	0.05	1237	7402	1502	3.73	80.10	74.60	-6.87%	1.06	22.90	21.20	-7.42%	N/A	N/A	N/A	N/A
K6	5600	HEAD	10-14-2024	20.8	20.8	0.05	1237	7402	1502	4.08	82.00	81.60	-0.49%	1.16	23.30	23.20	-0.43%	N/A	N/A	N/A	N/A
K6	5750	HEAD	10-14-2024	20.8	20.8	0.05	1237	7402	1502	4.03	79.20	80.60	1.77%	1.15	22.50	23.00	2.22%	N/A	N/A	N/A	N/A
K6	5850	HEAD	10-14-2024	20.8	20.8	0.05	1237	7402	1502	3.99	80.40	79.80	-0.75%	1.14	22.80	22.80	0.00%	N/A	N/A	N/A	N/A
AM7	6500	HEAD	10-14-2024	21.0	19.8	0.03	1018	7421	604	6.89	293.00	275.60	-5.94%	1.27	53.90	50.80	-5.75%	31.00	1310.00	1240.00	-5.34%
R	6500	HEAD	10-21-2024	21.0	21.0	0.03	1111	7527	1272	7.89	291.00	315.60	8.45%	1.45	53.50	58.00	8.41%	35.20	1300.00	1408.00	8.31%

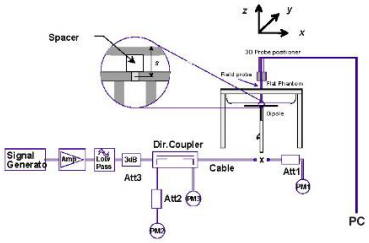


Figure 11-1
System Verification Setup Diagram

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.

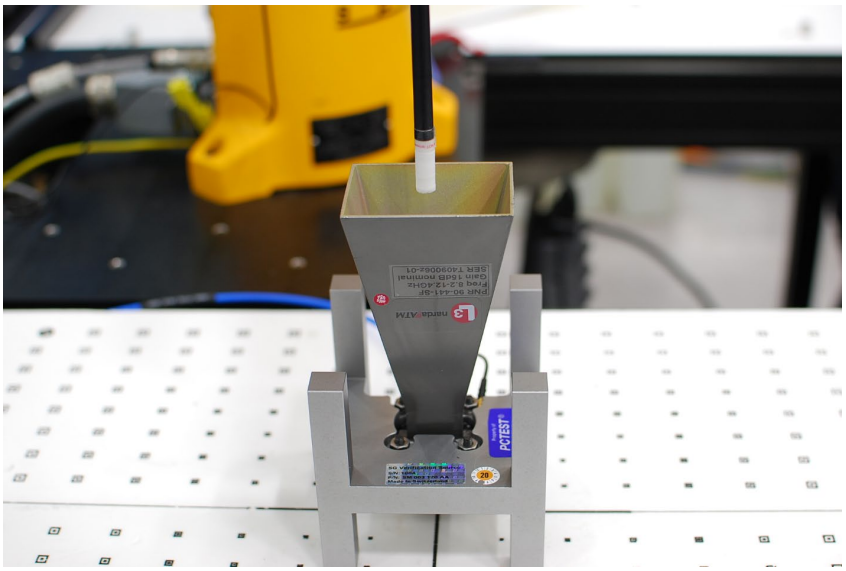


Figure 11-3
System Verification Setup Photo

Table 11-8
10 GHz Verifications

System	Frequency (GHz)	Date	Source S/N	Probe S/N	Normal psPD (W/m² over 4 cm²)		Deviation (dB)	Total psPD (W/m² over 4 cm²)		Deviation (dB)
					Measured	Target		Measured	Target	
AM12	10	09/30/2024	1006	9523	64.80	58.50	0.44	64.90	58.90	0.42
Q	10	10/20/2024	1002	9622	58.50	54.60	0.30	58.80	54.90	0.30

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
GSM 850 Antenna A Head SAR

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	A	0167M	1:8.3	-0.16	836.60	190	33.5	32.50	Right Cheek	0	0.070	1.259	0.088	0.543	0.339		34.8	32.4	32.2
Head	GSM 850	GSM	A	0167M	1:8.3	0.06	836.60	190	33.5	32.50	Right Tilt	0	0.048	1.259	0.060	0.373	0.233		36.4		
Head	GSM 850	GSM	A	0152M	1:8.3	0.12	836.60	190	33.5	32.50	Left Cheek	0	0.121	1.259	0.152	0.939	0.587		32.4		
Head	GSM 850	GSM	A	0152M	1:8.3	0.14	836.60	190	33.5	32.50	Left Tilt	0	0.066	1.259	0.083	0.512	0.320		35.1		
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 12-2
GSM 850 Antenna A Body-worn/Hotspot SAR

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 3 Tx Slots	A	0152M	1:2.76	-0.05	836.60	190	29.5	28.77	Back	10	0.246	1.183	0.291	0.494	0.309		30.4		
Hotspot	GPRS 850	GPRS 3 Tx Slots	A	0152M	1:2.76	-0.01	836.60	190	29.5	28.77	Front	10	0.141	1.183	0.167	0.283	0.177		32.8		
Hotspot	GPRS 850	GPRS 3 Tx Slots	A	0152M	1:2.76	-0.05	836.60	190	29.5	28.77	Bottom	10	0.058	1.183	0.069	0.117	0.073		36.7	30.4	27.4
Hotspot	GPRS 850	GPRS 3 Tx Slots	A	0152M	1:2.76	-0.05	836.60	190	29.5	28.77	Right	10	0.160	1.183	0.189	0.321	0.201		32.2		
Hotspot	GPRS 850	GPRS 3 Tx Slots	A	0152M	1:2.76	-0.04	836.60	190	29.5	28.77	Left	10	0.107	1.183	0.127	0.215	0.134		34.0		
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 12-3
GSM 850 Antenna E Head SAR

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	E	0152M	1:8.3	0.01	836.60	190	30.7	29.76	Right Cheek	0	0.401	1.242	0.498	0.498	0.311		24.5		
Head	GSM 850	GSM	E	0152M	1:8.3	0.01	836.60	190	30.7	29.76	Right Tilt	0	0.418	1.242	0.519	0.519	0.324		24.3	23.2	20.5
Head	GSM 850	GSM	E	0152M	1:8.3	0.08	836.60	190	30.7	29.76	Left Cheek	0	0.533	1.242	0.662	0.662	0.414	A1	23.2		
Head	GSM 850	GSM	E	0152M	1:8.3	-0.03	836.60	190	30.7	29.76	Left Tilt	0	0.490	1.242	0.609	0.609	0.381		23.6		
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 12-4
GSM 850 Antenna E Body-worn/Hotspot SAR

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 3 Tx Slots	E	0152M	1:2.76	-0.08	836.60	190	29.5	28.46	Back	10	0.385	1.271	0.489	0.870	0.544	A2	28.1		
Hotspot	GPRS 850	GPRS 3 Tx Slots	E	0152M	1:2.76	-0.13	836.60	190	29.5	28.46	Front	10	0.429	1.271	0.545	0.969	0.606		27.7	27.6	27.6
Hotspot	GPRS 850	GPRS 3 Tx Slots	E	0152M	1:2.76	-0.02	836.60	190	29.5	28.46	Top	10	0.437	1.271	0.555	0.987	0.617	A3	27.6		
Hotspot	GPRS 850	GPRS 3 Tx Slots	E	0152M	1:2.76	0.02	836.60	190	29.5	28.46	Right	10	0.291	1.271	0.370	0.657	0.411		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								

12.2 GSM 1900 Standalone SAR

Table 12-5
GSM 1900 Antenna A Head SAR

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	A	0132M	1:8.3	0.08	1880.00	661	31.0	29.41	Right Cheek	0	0.043	1.442	0.062	0.649	0.406		33.8		
Head	GSM 1900	GSM	A	0132M	1:8.3	0.01	1880.00	661	31.0	29.41	Right Tilt	0	0.019	1.442	0.027	0.287	0.179		37.4	32.0	32.0
Head	GSM 1900	GSM	A	0132M	1:8.3	0.09	1880.00	661	31.0	29.41	Left Cheek	0	0.065	1.442	0.094	0.982	0.614	A4	32.0		
Head	GSM 1900	GSM	A	0132M	1:8.3	0.10	1880.00	661	31.0	29.41	Left Tilt	0	0.025	1.442	0.036	0.378	0.236		36.2		
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 12-6
GSM 1900 Antenna A Body-worn/Hotspot SAR

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	A	0132M	1:2.076	-0.04	1909.80	810	24.2	22.43	Back	10	0.217	1.503	0.326	0.326	0.204	A5	25.8		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0132M	1:2.076	-0.02	1909.80	810	24.2	22.43	Front	10	0.177	1.503	0.266	0.266	0.166		26.7		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0132M	1:2.076	0.02	1909.80	810	24.2	22.43	Bottom	10	0.374	1.503	0.562	0.562	0.351	A6	23.5	23.5	20.0
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0132M	1:2.076	0.00	1909.80	810	24.2	22.43	Right	10	0.026	1.503	0.039	0.039	0.024		35.0		
Hotspot	GPRS 1900	GPRS 4 Tx Slots	A	0132M	1:2.076	0.07	1909.80	810	24.2	22.43	Left	10	0.035	1.503	0.053	0.053	0.033		33.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.3 UMTS 850 Standalone SAR

Table 12-7
UMTS 850 Antenna A Head SAR

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]	Tune state	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	A	0167M	1:1	0.03	846.60	4233	25.5	24.31	Right Cheek	0	0	0.151	1.315	0.199	0.995	0.622		32.5		
Head	UMTS 850	RMC	A	0167M	1:1	-0.03	846.60	4233	25.5	24.31	Right Tilt	0	0	0.049	1.315	0.064	0.323	0.202		37.4	32.5	32.5
Head	UMTS 850	RMC	A	0167M	1:1	0.02	846.60	4233	25.5	24.31	Left Cheek	0	11	0.068	1.315	0.089	0.448	0.280		35.9		
Head	UMTS 850	RMC	A	0167M	1:1	-0.07	846.60	4233	25.5	24.31	Left Tilt	0	11	0.058	1.315	0.076	0.382	0.239		36.6		
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 12-8
UMTS 850 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0167M	1:1	0.01	846.60	4233	25.5	24.31	Back	10	0	0.280	1.315	0.368	0.655	0.409		29.8		
Hotspot	UMTS 850	RMC	A	0167M	1:1	-0.06	846.60	4233	25.5	24.31	Front	10	0	0.190	1.315	0.250	0.444	0.278		31.5		
Hotspot	UMTS 850	RMC	A	0167M	1:1	-0.03	846.60	4233	25.5	24.31	Bottom	10	0	0.073	1.315	0.096	0.171	0.107		35.6	29.8	28.0
Hotspot	UMTS 850	RMC	A	0167M	1:1	0.00	846.60	4233	25.5	24.31	Right	10	11	0.165	1.315	0.217	0.386	0.241		32.1		
Hotspot	UMTS 850	RMC	A	0167M	1:1	-0.01	846.60	4233	25.5	24.31	Left	10	0	0.109	1.315	0.143	0.255	0.159		33.9		
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 12-9
UMTS 850 Antenna E Head SAR

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	E	0167M	1:1	-0.01	826.40	4132	22.0	20.23	Right Cheek	0	0.426	1.503	0.640	0.640	0.400		23.9		
Head	UMTS 850	RMC	E	0167M	1:1	-0.02	836.60	4183	22.0	20.08	Right Cheek	0	0.485	1.556	0.755	0.755	0.472		23.2		
Head	UMTS 850	RMC	E	0167M	1:1	-0.04	846.60	4233	22.0	20.25	Right Cheek	0	0.538	1.496	0.805	0.805	0.503	A7	22.9	22.9	21.0
Head	UMTS 850	RMC	E	0167M	1:1	-0.01	846.60	4233	22.0	20.25	Right Tilt	0	0.474	1.496	0.709	0.709	0.443		23.4		
Head	UMTS 850	RMC	E	0167M	1:1	0.01	846.60	4233	22.0	20.25	Left Cheek	0	0.523	1.496	0.782	0.782	0.489		23.0		
Head	UMTS 850	RMC	E	0167M	1:1	-0.03	846.60	4233	22.0	20.25	Left Tilt	0	0.445	1.496	0.666	0.666	0.416		23.7		
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 12-10
UMTS 850 Antenna E Body-worn/Hotspot SAR

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	E	0167M	1:1	-0.02	846.60	4233	25.5	23.85	Back	10	0.519	1.462	0.759	0.978	0.611	A8	26.6	26.6	26.6
Hotspot	UMTS 850	RMC	E	0167M	1:1	-0.08	846.60	4233	25.5	23.85	Front	10	0.298	1.462	0.436	0.561	0.351		29.1		
Hotspot	UMTS 850	RMC	E	0167M	1:1	-0.07	846.60	4233	25.5	23.85	Top	10	0.430	1.462	0.629	0.810	0.506		27.5		
Hotspot	UMTS 850	RMC	E	0167M	1:1	-0.02	846.60	4233	25.5	23.85	Right	10	0.299	1.462	0.437	0.563	0.352		29.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.4 UMTS 1750 Standalone SAR

Table 12-11
UMTS 1750 Antenna A Head SAR

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]	Tune state	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	A	0132M	1:1	-0.17	1712.40	1312	24.5	22.85	Right Cheek	0	34	0.075	1.462	0.110	0.437	0.273		34.0	31.3	30.5
Head	UMTS 1750	RMC	A	0132M	1:1	0.02	1712.40	1312	24.5	22.85	Right Tilt	0	34	0.054	1.462	0.079	0.314	0.196		35.5		
Head	UMTS 1750	RMC	A	0132M	1:1	0.02	1712.40	1312	24.5	22.85	Left Cheek	0	34	0.140	1.462	0.205	0.815	0.509	A9	31.3		
Head	UMTS 1750	RMC	A	0132M	1:1	-0.02	1712.40	1312	24.5	22.85	Left Tilt	0	34	0.089	1.462	0.130	0.518	0.324		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 12-12
UMTS 1750 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0132M	1:1	-0.02	1712.40	1312	21.0	19.95	Back	10	34	0.548	1.274	0.698	0.698	0.436	A10	22.5	20.2	20.0
Hotspot	UMTS 1750	RMC	A	0132M	1:1	-0.02	1712.40	1312	21.0	19.95	Front	10	34	0.491	1.274	0.626	0.626	0.391		23.0		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	0.00	1712.40	1312	21.0	19.95	Bottom	10	34	0.876	1.274	1.116	1.116	0.698		20.5		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	-0.01	1732.40	1412	21.0	19.82	Bottom	10	34	0.899	1.312	1.179	1.179	0.737		20.2		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	0.00	1752.60	1513	21.0	19.85	Bottom	10	34	0.908	1.303	1.183	1.183	0.739	A11	20.2		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	0.00	1752.60	1513	21.0	19.85	Bottom	10	34	0.908	1.303	1.183	1.183	0.739		20.2		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	-0.04	1712.40	1312	21.0	19.95	Right	10	34	0.080	1.274	0.102	0.102	0.064		30.9		
Hotspot	UMTS 1750	RMC	A	0132M	1:1	0.04	1712.40	1312	21.0	19.95	Left	10	34	0.111	1.274	0.141	0.141	0.088		29.4		
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

12.5 UMTS 1900 Standalone SAR

Table 12-13
UMTS 1900 Antenna A Head SAR

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]	Tune state	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	A	0132M	1:1	-0.07	1880.00	9400	24.5	23.05	Right Cheek	0	38	0.074	1.396	0.103	0.451	0.282		34.3	30.9	30.9
Head	UMTS 1900	RMC	A	0132M	1:1	-0.03	1880.00	9400	24.5	23.05	Right Tilt	0	38	0.053	1.396	0.074	0.323	0.202		35.8		
Head	UMTS 1900	RMC	A	0132M	1:1	0.11	1880.00	9400	24.5	23.05	Left Cheek	0	17	0.164	1.396	0.229	1.000	0.625	A12	30.9		
Head	UMTS 1900	RMC	A	0132M	1:1	0.00	1880.00	9400	24.5	23.05	Left Tilt	0	38	0.052	1.396	0.073	0.317	0.198		35.8		
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 12-14
UMTS 1900 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	1534M	1:1	0.01	1852.40	9262	20.0	19.53	Back	10	9	0.416	1.114	0.463	0.463	0.289	A13	23.3	19.2	19.0
Hotspot	UMTS 1900	RMC	A	1534M	1:1	0.03	1852.40	9262	20.0	19.53	Front	10	8	0.418	1.114	0.466	0.466	0.291		23.3		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	0.00	1852.40	9262	20.0	19.53	Bottom	10	7	0.921	1.114	1.026	1.026	0.641		19.8		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	0.00	1880.00	9400	20.0	19.40	Bottom	10	8	0.946	1.148	1.086	1.086	0.679		19.6		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	0.00	1907.60	9538	20.0	19.34	Bottom	10	7	1.020	1.164	1.187	1.187	0.742	A14	19.2		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	0.00	1907.60	9538	20.0	19.34	Bottom	10	7	0.980	1.164	1.158	1.158	0.724		19.3		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	-0.13	1852.40	9262	20.0	19.53	Right	10	19	0.069	1.114	0.077	0.077	0.048		31.1		
Hotspot	UMTS 1900	RMC	A	1534M	1:1	-0.02	1852.40	9262	20.0	19.53	Left	10	19	0.073	1.114	0.081	0.081	0.051		30.8		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.6 LTE Band 12 Standalone SAR

Table 12-15
LTE Band 12 Antenna A Head SAR

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]	Tune state	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	A	0173M	1:1	-0.20	707.50	23095	0.0	25.0	23.46	1	0	Right Cheek	0	1	0.119	1.426	0.170	0.999	0.624		32.7		
Head	LTE Band 12	10	QPSK	A	0173M	1:1	0.01	707.50	23095	1.0	24.0	22.57	25	25	Right Cheek	0	1	0.096	1.390	0.133	0.989	0.618		32.7		
Head	LTE Band 12	10	QPSK	A	0173M	1:1	0.05	707.50	23095	0.0	25.0	23.46	1	0	Right Tilt	0	0	0.062	1.426	0.088	0.520	0.325		35.5		
Head	LTE Band 12	10	QPSK	A	0173M	1:1	0.08	707.50	23095	1.0	24.0	22.57	25	25	Right Tilt	0	0	0.052	1.390	0.072	0.536	0.335		35.4	32.7	32.7
Head	LTE Band 12	10	QPSK	A	0134M	1:1	0.04	707.50	23095	0.0	25.0	23.46	1	0	Left Cheek	0	0	0.099	1.426	0.141	0.831	0.519		33.5		
Head	LTE Band 12	10	QPSK	A	0134M	1:1	0.17	707.50	23095	1.0	24.0	22.57	25	25	Left Cheek	0	0	0.080	1.390	0.111	0.824	0.515		33.5		
Head	LTE Band 12	10	QPSK	A	0134M	1:1	-0.09	707.50	23095	0.0	25.0	23.46	1	0	Left Tilt	0	0	0.044	1.426	0.063	0.369	0.231		37.0		
Head	LTE Band 12	10	QPSK	A	0134M	1:1	-0.20	707.50	23095	1.0	24.0	22.57	25	25	Left Tilt	0	0	0.037	1.390	0.051	0.381	0.238		36.8		
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 12-16
LTE Band 12 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0173M	1:1	-0.13	707.50	23095	0.0	25.0	23.46	1	0	Back	10	0	0.307	1.426	0.438	0.760	0.475		28.5		
Body-worn/Hotspot	LTE Band 12	10	QPSK	A	0173M	1:1	-0.09	707.50	23095	1.0	24.0	22.57	25	25	Back	10	0	0.253	1.390	0.352	0.769	0.481		28.5		
Hotspot	LTE Band 12	10	QPSK	A	0173M	1:1	-0.13	707.50	23095	0.0	25.0	23.46	1	0	Front	10	0	0.213	1.426	0.304	0.528	0.330		30.1		
Hotspot	LTE Band 12	10	QPSK	A	0173M	1:1	-0.02	707.50	23095	1.0	24.0	22.57	25	25	Front	10	0	0.167	1.390	0.232	0.508	0.318		30.3		
Hotspot	LTE Band 12	10	QPSK	A	0134M	1:1	-0.03	707.50	23095	0.0	25.0	23.46	1	0	Bottom	10	0	0.080	1.426	0.114	0.198	0.124		34.4	28.5	27.4
Hotspot	LTE Band 12	10	QPSK	A	0134M	1:1	-0.02	707.50	23095	1.0	24.0	22.57	25	25	Bottom	10	0	0.068	1.390	0.095	0.207	0.129		34.2		
Hotspot	LTE Band 12	10	QPSK	A	0173M	1:1	0.04	707.50	23095	0.0	25.0	23.46	1	0	Right	10	0	0.131	1.426	0.187	0.324	0.203		32.2		
Hotspot	LTE Band 12	10	QPSK	A	0173M	1:1	0.15	707.50	23095	1.0	24.0	22.57	25	25	Right	10	0	0.116	1.390	0.161	0.353	0.221		31.9		
Hotspot	LTE Band 12	10	QPSK	A	0134M	1:1	0.00	707.50	23095	0.0	25.0	23.46	1	0	Left	10	0	0.116	1.426	0.165	0.287	0.179		32.8		
Hotspot	LTE Band 12	10	QPSK	A	0134M	1:1	0.09	707.50	23095	1.0	24.0	22.57	25	25	Left	10	0	0.111	1.390	0.154	0.338	0.211		32.1		
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 12-17
LTE Band 12 Antenna E Head SAR

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	E	0173M	1:1	0.19	707.50	23095	0.0	22.0	20.18	1	0	Right Cheek	0	0.348	1.521	0.529	0.529	0.331		24.7		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.00	707.50	23095	0.0	22.0	20.16	25	25	Right Cheek	0	0.332	1.528	0.507	0.507	0.317		24.9		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	-0.01	707.50	23095	0.0	22.0	20.18	1	0	Right Tilt	0	0.327	1.521	0.497	0.497	0.311		25.0		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.03	707.50	23095	0.0	22.0	20.16	25	25	Right Tilt	0	0.313	1.528	0.478	0.478	0.299		25.2		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.11	707.50	23095	0.0	22.0	20.18	1	0	Left Cheek	0	0.573	1.521	0.872	0.872	0.545	A15	22.5	22.5	21.0
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.15	707.50	23095	0.0	22.0	20.16	25	25	Left Cheek	0	0.528	1.528	0.807	0.807	0.504		22.9		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.11	707.50	23095	0.0	22.0	20.15	50	0	Left Cheek	0	0.540	1.531	0.827	0.827	0.517		22.8		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.12	707.50	23095	0.0	22.0	20.18	1	0	Left Tilt	0	0.508	1.521	0.773	0.773	0.483		23.1		
Head	LTE Band 12	10	QPSK	E	0173M	1:1	0.21	707.50	23095	0.0	22.0	20.16	25	25	Left Tilt	0	0.493	1.528	0.753	0.753	0.471		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 12-18
LTE Band 12 Antenna E Body-worn/Hotspot SAR

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	E	0173M	1:1	-0.04	707.50	23095	0.0	25.0	23.18	1	25	Back	10	0.365	1.521	0.555	0.784	0.490	A16	27.5		
Body-worn/Hotspot	LTE Band 12	10	QPSK	E	0173M	1:1	-0.10	707.50	23095	1.0	24.0	22.29	25	25	Back	10	0.264	1.483	0.392	0.696	0.435		28.0		
Hotspot	LTE Band 12	10	QPSK	E	0173M	1:1	-0.11	707.50	23095	0.0	25.0	23.18	1	25	Front	10	0.237	1.521	0.360	0.509	0.318		29.4		
Hotspot	LTE Band 12	10	QPSK	E	0173M	1:1	-0.02	707.50	23095	1.0	24.0	22.29	25	25	Front	10	0.161	1.483	0.239	0.424	0.265		30.2		
Hotspot	LTE Band 12	10	QPSK	E	0173M	1:1	0.08	707.50	23095	0.0	25.0	23.18	1	25	Top	10	0.373	1.521	0.567	0.801	0.501	A17	27.4	27.4	26.5
Hotspot	LTE Band 12	10	QPSK	E	0173M	1:1	-0.06	707.50	23095	1.0	24.0	22.29	25	25	Top	10	0.286	1.483	0.424	0.754	0.471		27.7		
Hotspot	LTE Band 12	10	QPSK	E	0174M	1:1	0.15	707.50	23095	0.0	25.0	23.18	1	25	Right	10	0.334	1.521	0.508	0.717	0.448		27.9		
Hotspot	LTE Band 12	10	QPSK	E	0174M	1:1	-0.08	707.50	23095	1.0	24.0	22.29	25	25	Right	10	0.248	1.483	0.368	0.654	0.409		28.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.7 LTE Band 13 Standalone SAR

Table 12-19
LTE Band 13 Antenna A Head SAR

	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]	Tune state	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	A	0173M	1:1	0.03	782.00	23230	0.0	25.0	23.89	1	25	Right Cheek	0	0	0.150	1.291	0.194	0.993	0.621		32.1		
Head	LTE Band 13	10	QPSK	A	0173M	1:1	0.09	782.00	23230	1.0	24.0	22.79	25	12	Right Cheek	0	0	0.112	1.321	0.148	0.955	0.597		32.2		
Head	LTE Band 13	10	QPSK	A	0173M	1:1	0.03	782.00	23230	0.0	25.0	23.89	1	25	Right Tilt	0	11	0.073	1.291	0.094	0.483	0.302		35.2		
Head	LTE Band 13	10	QPSK	A	0173M	1:1	-0.13	782.00	23230	1.0	24.0	22.79	25	12	Right Tilt	0	11	0.056	1.321	0.074	0.478	0.299		35.3		
Head	LTE Band 13	10	QPSK	A	0134M	1:1	0.19	782.00	23230	0.0	25.0	23.89	1	25	Left Cheek	0	0	0.103	1.291	0.133	0.682	0.426		33.7	32.1	32.1
Head	LTE Band 13	10	QPSK	A	0134M	1:1	0.02	782.00	23230	1.0	24.0	22.79	25	12	Left Cheek	0	0	0.081	1.321	0.107	0.691	0.432		33.7		
Head	LTE Band 13	10	QPSK	A	0134M	1:1	-0.07	782.00	23230	0.0	25.0	23.89	1	25	Left Tilt	0	0	0.050	1.291	0.065	0.331	0.207		36.9		
Head	LTE Band 13	10	QPSK	A	0134M	1:1	0.03	782.00	23230	1.0	24.0	22.79	25	12	Left Tilt	0	0	0.041	1.321	0.054	0.350	0.219		36.6		
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 12-20
LTE Band 13 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0173M	1:1	0.14	782.00	23230	0.0	25.0	23.89	1	25	Back	10	0	0.329	1.291	0.425	0.929	0.581		28.7	28.7	28.4
Body-worn/Hotspot	LTE Band 13	10	QPSK	A	0173M	1:1	-0.09	782.00	23230	1.0	24.0	22.79	25	12	Back	10	0	0.239	1.321	0.316	0.870	0.544		29.0		
Hotspot	LTE Band 13	10	QPSK	A	0173M	1:1	-0.01	782.00	23230	0.0	25.0	23.89	1	25	Front	10	0	0.190	1.291	0.245	0.537	0.336		31.1		
Hotspot	LTE Band 13	10	QPSK	A	0173M	1:1	-0.02	782.00	23230	1.0	24.0	22.79	25	12	Front	10	0	0.151	1.321	0.199	0.549	0.343		31.0		
Hotspot	LTE Band 13	10	QPSK	A	0134M	1:1	-0.15	782.00	23230	0.0	25.0	23.89	1	25	Bottom	10	0	0.057	1.291	0.074	0.161	0.101		36.3		
Hotspot	LTE Band 13	10	QPSK	A	0134M	1:1	0.00	782.00	23230	1.0	24.0	22.79	25	12	Bottom	10	0	0.044	1.321	0.058	0.160	0.100		36.3		
Hotspot	LTE Band 13	10	QPSK	A	0173M	1:1	0.10	782.00	23230	0.0	25.0	23.89	1	25	Right	10	11	0.155	1.291	0.200	0.438	0.274		31.9		
Hotspot	LTE Band 13	10	QPSK	A	0173M	1:1	-0.04	782.00	23230	1.0	24.0	22.79	25	12	Right	10	11	0.118	1.321	0.156	0.429	0.268		32.0		
Hotspot	LTE Band 13	10	QPSK	A	0134M	1:1	0.10	782.00	23230	0.0	25.0	23.89	1	25	Left	10	0	0.136	1.291	0.176	0.384	0.240		32.5		
Hotspot	LTE Band 13	10	QPSK	A	0134M	1:1	-0.01	782.00	23230	1.0	24.0	22.79	25	12	Left	10	0	0.109	1.321	0.144	0.397	0.248		32.4		
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 12-21
LTE Band 13 Antenna E Head SAR

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	E	0173M	1:1	0.08	782.00	23230	0.0	22.0	20.67	1	25	Right Cheek	0	0.474	1.358	0.644	0.644	0.403		23.9	21.2	21.0
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.02	782.00	23230	0.0	22.0	20.34	25	12	Right Cheek	0	0.460	1.466	0.674	0.674	0.421		23.7		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	-0.10	782.00	23230	0.0	22.0	20.67	1	25	Right Tilt	0	0.468	1.358	0.636	0.636	0.398		23.9		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.02	782.00	23230	0.0	22.0	20.34	25	12	Right Tilt	0	0.448	1.466	0.657	0.657	0.411		23.8		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.11	782.00	23230	0.0	22.0	20.67	1	25	Left Cheek	0	0.782	1.358	1.062	1.062	0.664		21.7		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.11	782.00	23230	0.0	22.0	20.34	25	12	Left Cheek	0	0.792	1.466	1.161	1.161	0.726		21.3		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.09	782.00	23230	0.0	22.0	20.30	50	0	Left Cheek	0	0.795	1.479	1.176	1.176	0.735	A18	21.2		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.09	782.00	23230	0.0	22.0	20.67	1	25	Left Tilt	0	0.695	1.358	0.944	0.944	0.590		22.2		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.08	782.00	23230	0.0	22.0	20.34	25	12	Left Tilt	0	0.685	1.466	1.004	1.004	0.628		21.9		
Head	LTE Band 13	10	QPSK	E	0173M	1:1	0.06	782.00	23230	0.0	22.0	20.30	50	0	Left Tilt	0	0.727	1.479	1.075	1.075	0.672		21.6		
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 12-22
LTE Band 13 Antenna E Body-worn/Hotspot SAR

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	E	0134M	1:1	0.15	782.00	23230	0.0	25.0	23.93	1	25	Back	10	0.594	1.279	0.760	0.935	0.584	A19	26.1	25.9	25.9
Body-worn/Hotspot	LTE Band 13	10	QPSK	E	0134M	1:1	-0.03	782.00	23230	1.0	24.0	22.57	25	0	Back	10	0.456	1.390	0.634	0.982	0.614		25.9		
Hotspot	LTE Band 13	10	QPSK	E	0173M	1:1	-0.06	782.00	23230	0.0	25.0	23.93	1	25	Front	10	0.335	1.279	0.428	0.527	0.329		28.6		
Hotspot	LTE Band 13	10	QPSK	E	0173M	1:1	0.00	782.00	23230	1.0	24.0	22.57	25	0	Front	10	0.263	1.390	0.366	0.566	0.354		28.3		
Hotspot	LTE Band 13	10	QPSK	E	0134M	1:1	0.05	782.00	23230	0.0	25.0	23.93	1	25	Top	10	0.414	1.279	0.530	0.652	0.408		27.7		
Hotspot	LTE Band 13	10	QPSK	E	0134M	1:1	-0.05	782.00	23230	1.0	24.0	22.57	25	0	Top	10	0.337	1.390	0.468	0.726	0.454		27.2		
Hotspot	LTE Band 13	10	QPSK	E	0134M	1:1	0.10	782.00	23230	0.0	25.0	23.93	1	25	Right	10	0.357	1.279	0.457	0.562	0.351		28.4		
Hotspot	LTE Band 13	10	QPSK	E	0134M	1:1	0.06	782.00	23230	1.0	24.0	22.57	25	0	Right	10	0.283	1.390	0.393	0.609	0.381		28.0		
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 LTE Band 26 (Cell) Standalone SAR

Table 12-23
LTE Band 26 Antenna A Head SAR

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]	Tune state	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	A	0173M	1:1	-0.02	831.50	26865	0.0	25.0	24.02	1	36	Right Cheek	0	3	0.145	1.253	0.182	0.954	0.596		32.4	32.2	32.2
Head	LTE Band 26	15	QPSK	A	0173M	1:1	0.02	831.50	26865	1.0	24.0	22.91	36	18	Right Cheek	0	3	0.117	1.285	0.150	0.994	0.621		32.2		
Head	LTE Band 26	15	QPSK	A	0173M	1:1	0.04	831.50	26865	0.0	25.0	24.02	1	36	Right Tilt	0	1	0.096	1.253	0.120	0.631	0.394		34.1		
Head	LTE Band 26	15	QPSK	A	0173M	1:1	0.01	831.50	26865	1.0	24.0	22.91	36	18	Right Tilt	0	1	0.069	1.285	0.089	0.586	0.366		34.5		
Head	LTE Band 26	15	QPSK	A	0134M	1:1	-0.05	831.50	26865	0.0	25.0	24.02	1	36	Left Cheek	0	0	0.106	1.253	0.133	0.697	0.436		33.7		
Head	LTE Band 26	15	QPSK	A	0134M	1:1	0.09	831.50	26865	1.0	24.0	22.91	36	18	Left Cheek	0	0	0.078	1.285	0.100	0.662	0.414		33.9		
Head	LTE Band 26	15	QPSK	A	0134M	1:1	0.01	831.50	26865	0.0	25.0	24.02	1	36	Left Tilt	0	0	0.059	1.253	0.074	0.388	0.243		36.3		
Head	LTE Band 26	15	QPSK	A	0134M	1:1	0.02	831.50	26865	1.0	24.0	22.91	36	18	Left Tilt	0	0	0.044	1.285	0.057	0.374	0.234		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 12-24
LTE Band 26 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0173M	1:1	0.08	831.50	26865	0.0	25.0	24.02	1	36	Back	10	3	0.260	1.253	0.326	0.430	0.269		29.8	29.8	26.2
Body-worn/Hotspot	LTE Band 26	15	QPSK	A	0173M	1:1	-0.16	831.50	26865	1.0	24.0	22.91	36	18	Back	10	3	0.184	1.285	0.236	0.392	0.245		30.2		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	-0.11	831.50	26865	0.0	25.0	24.02	1	36	Front	10	0	0.110	1.253	0.138	0.182	0.114		33.6		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	-0.10	831.50	26865	1.0	24.0	22.91	36	18	Front	10	0	0.084	1.285	0.108	0.179	0.112		33.6		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	0.09	831.50	26865	0.0	25.0	24.02	1	36	Bottom	10	0	0.051	1.253	0.064	0.084	0.053		36.9		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	0.02	831.50	26865	1.0	24.0	22.91	36	18	Bottom	10	0	0.040	1.285	0.051	0.085	0.053		36.8		
Hotspot	LTE Band 26	15	QPSK	A	0173M	1:1	0.16	831.50	26865	0.0	25.0	24.02	1	36	Right	10	1	0.142	1.253	0.178	0.235	0.147		32.4		
Hotspot	LTE Band 26	15	QPSK	A	0173M	1:1	0.03	831.50	26865	1.0	24.0	22.91	36	18	Right	10	1	0.108	1.285	0.139	0.230	0.144		32.5		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	-0.21	831.50	26865	0.0	25.0	24.02	1	36	Left	10	1	0.098	1.253	0.123	0.162	0.101		34.1		
Hotspot	LTE Band 26	15	QPSK	A	0134M	1:1	0.08	831.50	26865	1.0	24.0	22.91	36	18	Left	10	1	0.081	1.285	0.104	0.173	0.108		33.8		
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 12-25
LTE Band 26 Antenna E Head SAR

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	E	0134M	1:1	-0.17	831.50	26865	0.0	22.0	20.16	1	0	Right Cheek	0	0.514	1.528	0.785	0.785	0.491		23.0	21.2	21.0
Head	LTE Band 26	15	QPSK	E	0134M	1:1	0.07	831.50	26865	0.0	22.0	20.22	36	18	Right Cheek	0	0.516	1.507	0.778	0.778	0.486		23.0		
Head	LTE Band 26	15	QPSK	E	0134M	1:1	0.01	831.50	26865	0.0	22.0	20.16	1	0	Right Tilt	0	0.520	1.528	0.795	0.795	0.497		22.9		
Head	LTE Band 26	15	QPSK	E	0134M	1:1	0.04	831.50	26865	0.0	22.0	20.22	36	18	Right Tilt	0	0.518	1.507	0.781	0.781	0.488		23.0		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.03	831.50	26865	0.0	22.0	20.16	1	0	Left Cheek	0	0.775	1.528	1.184	1.184	0.740	A20	21.2		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.11	831.50	26865	0.0	22.0	20.22	36	18	Left Cheek	0	0.751	1.507	1.132	1.132	0.708		21.4		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.10	831.50	26865	0.0	22.0	20.15	75	0	Left Cheek	0	0.753	1.531	1.153	1.153	0.721		21.3		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.05	831.50	26865	0.0	22.0	20.16	1	0	Left Tilt	0	0.676	1.528	1.033	1.033	0.646		21.8		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.13	831.50	26865	0.0	22.0	20.22	36	18	Left Tilt	0	0.704	1.507	1.061	1.061	0.663		21.7		
Head	LTE Band 26	15	QPSK	E	0173M	1:1	0.19	831.50	26865	0.0	22.0	20.15	75	0	Left Tilt	0	0.667	1.531	1.021	1.021	0.638		21.9		
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 12-26
LTE Band 26 Antenna E Body-worn/Hotspot SAR

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	E	1532M	1:1	-0.17	831.50	26865	0.0	25.0	23.46	1	0	Back	10	0.579	1.426	0.826	0.992	0.620	A21	25.8		
Body-worn/Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	-0.01	831.50	26865	1.0	24.0	22.44	36	18	Back	10	0.446	1.432	0.639	0.967	0.604		25.9		
Body-worn/Hotspot	LTE Band 26	15	QPSK	E	0146M	1:1	-0.02	831.50	26865	1.0	24.0	22.40	75	0	Back	10	0.297	1.445	0.429	0.650	0.406		27.6		
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	0.02	831.50	26865	0.0	25.0	23.46	1	0	Front	10	0.363	1.426	0.518	0.622	0.389		27.8		
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	-0.12	831.50	26865	1.0	24.0	22.44	36	18	Front	10	0.319	1.432	0.457	0.692	0.433		27.4	25.8	25.8
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	0.11	831.50	26865	0.0	25.0	23.46	1	0	Top	10	0.389	1.426	0.555	0.667	0.417		27.5		
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	-0.03	831.50	26865	1.0	24.0	22.44	36	18	Top	10	0.325	1.432	0.465	0.705	0.441		27.3		
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	-0.16	831.50	26865	0.0	25.0	23.46	1	0	Right	10	0.303	1.426	0.432	0.519	0.324		28.6		
Hotspot	LTE Band 26	15	QPSK	E	0134M	1:1	-0.03	831.50	26865	1.0	24.0	22.44	36	18	Right	10	0.259	1.432	0.371	0.562	0.351		28.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.9 LTE Band 66 (AWS) Standalone SAR

Table 12-27
LTE Band 66 (AWS) Antenna A Head SAR

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]	Tune state	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	A	0124M	1:1	-0.17	1720.00	132072	0.0	24.0	22.77	1	0	Right Cheek	0	55	0.068	1.327	0.090	0.422	0.264		34.4		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	0.03	1720.00	132072	1.0	23.0	21.80	50	0	Right Cheek	0	55	0.052	1.318	0.069	0.404	0.253		34.6		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	-0.19	1720.00	132072	0.0	24.0	22.77	1	0	Right Tilt	0	55	0.049	1.327	0.065	0.304	0.190		35.8		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	-0.17	1720.00	132072	1.0	23.0	21.80	50	0	Right Tilt	0	55	0.044	1.318	0.058	0.342	0.214		35.3		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	-0.05	1720.00	132072	0.0	24.0	22.77	1	0	Left Cheek	0	55	0.150	1.327	0.199	0.931	0.582		31.0	30.7	30.7
Head	LTE Band 66	20	QPSK	A	0124M	1:1	0.02	1720.00	132072	1.0	23.0	21.80	50	0	Left Cheek	0	55	0.127	1.318	0.167	0.986	0.616		30.7		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	-0.20	1720.00	132072	0.0	24.0	22.77	1	0	Left Tilt	0	55	0.046	1.327	0.061	0.286	0.179		36.1		
Head	LTE Band 66	20	QPSK	A	0124M	1:1	0.02	1720.00	132072	1.0	23.0	21.80	50	0	Left Tilt	0	55	0.031	1.318	0.041	0.241	0.151		36.8		
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 12-28
LTE Band 66 (AWS) Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	1252M	1:1	0.15	1720.00	132072	0.0	19.5	18.22	1	0	Back	10	55	0.345	1.343	0.463	0.463	0.289		22.8		
Body-worn/Hotspot	LTE Band 66	20	QPSK	A	1252M	1:1	0.02	1720.00	132072	0.0	19.5	18.25	50	0	Back	10	55	0.356	1.334	0.475	0.475	0.297	A23	22.7		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	0.04	1720.00	132072	0.0	19.5	18.22	1	0	Front	10	55	0.280	1.343	0.376	0.376	0.235		23.7		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	0.07	1720.00	132072	0.0	19.5	18.25	50	0	Front	10	55	0.290	1.334	0.387	0.387	0.242		23.6		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	-0.05	1720.00	132072	0.0	19.5	18.22	1	0	Bottom	10	55	0.498	1.343	0.669	0.669	0.418		21.2		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	-0.02	1720.00	132072	0.0	19.5	18.25	50	0	Bottom	10	55	0.523	1.334	0.698	0.698	0.436		21.0	21.0	18.5
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	-0.10	1720.00	132072	0.0	19.5	18.22	1	0	Right	10	55	0.059	1.343	0.079	0.079	0.049		30.5		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	0.09	1720.00	132072	0.0	19.5	18.25	50	0	Right	10	55	0.062	1.334	0.083	0.083	0.052		30.3		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	-0.19	1720.00	132072	0.0	19.5	18.22	1	0	Left	10	55	0.072	1.343	0.097	0.097	0.061		29.6		
Hotspot	LTE Band 66	20	QPSK	A	0124M	1:1	-0.18	1720.00	132072	0.0	19.5	18.25	50	0	Left	10	55	0.072	1.334	0.096	0.096	0.060		29.6		
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 12-29
LTE Band 66 (AWS) Antenna F Head SAR

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	F	0124M	1:1	0.01	1720.00	132072	0.0	19.0	17.38	1	50	Right Cheek	0	0.782	1.452	1.135	1.135	0.709		18.4		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1745.00	132322	0.0	19.0	17.55	1	50	Right Cheek	0	0.834	1.396	1.164	1.164	0.728		18.3		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1770.00	132572	0.0	19.0	17.56	1	99	Right Cheek	0	0.774	1.393	1.078	1.078	0.674		18.6		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1720.00	132072	0.0	19.0	17.39	50	25	Right Cheek	0	0.797	1.449	1.155	1.155	0.722		18.3		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.01	1745.00	132322	0.0	19.0	17.55	50	50	Right Cheek	0	0.816	1.396	1.139	1.139	0.712		18.4		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.09	1770.00	132572	0.0	19.0	17.60	50	50	Right Cheek	0	0.798	1.380	1.101	1.101	0.688		18.5		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1770.00	132572	0.0	19.0	17.50	100	0	Right Cheek	0	0.784	1.413	1.108	1.108	0.693		18.5		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1720.00	132072	0.0	19.0	17.38	1	50	Right Tilt	0	0.818	1.452	1.188	1.188	0.743		18.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.03	1745.00	132322	0.0	19.0	17.55	1	50	Right Tilt	0	0.840	1.396	1.173	1.173	0.733		18.3		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.03	1770.00	132572	0.0	19.0	17.56	1	99	Right Tilt	0	0.773	1.393	1.077	1.077	0.673		18.6		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1720.00	132072	0.0	19.0	17.39	50	25	Right Tilt	0	0.828	1.449	1.200	1.200	0.750		18.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.02	1745.00	132322	0.0	19.0	17.55	50	50	Right Tilt	0	0.842	1.396	1.175	1.175	0.734	A22	18.2	18.2	18.0
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.02	1770.00	132572	0.0	19.0	17.60	50	50	Right Tilt	0	0.801	1.380	1.105	1.105	0.691		18.5		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.02	1770.00	132572	0.0	19.0	17.50	100	0	Right Tilt	0	0.804	1.413	1.136	1.136	0.710		18.4		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.00	1770.00	132572	0.0	19.0	17.56	1	99	Left Cheek	0	0.538	1.393	0.749	0.749	0.468		20.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.03	1770.00	132572	0.0	19.0	17.60	50	50	Left Cheek	0	0.544	1.380	0.751	0.751	0.469		20.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.04	1720.00	132072	0.0	19.0	17.38	1	50	Left Tilt	0	0.645	1.452	0.937	0.937	0.586		19.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1745.00	132322	0.0	19.0	17.55	1	50	Left Tilt	0	0.681	1.396	0.951	0.951	0.594		19.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1770.00	132572	0.0	19.0	17.56	1	99	Left Tilt	0	0.639	1.393	0.890	0.890	0.556		19.5		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1720.00	132072	0.0	19.0	17.39	50	25	Left Tilt	0	0.654	1.449	0.948	0.948	0.593		19.2		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.00	1745.00	132322	0.0	19.0	17.55	50	50	Left Tilt	0	0.668	1.396	0.933	0.933	0.583		19.3		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1770.00	132572	0.0	19.0	17.60	50	50	Left Tilt	0	0.647	1.380	0.893	0.893	0.558		19.4		
Head	LTE Band 66	20	QPSK	F	0124M	1:1	-0.01	1770.00	132572	0.0	19.0	17.50	100	0	Left Tilt	0	0.643	1.413	0.909	0.909	0.568		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 12-30
LTE Band 66 (AWS) Antenna F Body-worn/Hotspot SAR

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	F	0124M	1:1	-0.01	1770.00	132572	0.0	21.0	19.60	1	50	Back	10	0.228	1.380	0.315	0.315	0.197		26.0		
Body-worn/Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	0.01	1770.00	132572	0.0	21.0	19.59	50	50	Back	10	0.230	1.384	0.318	0.318	0.199		25.9		
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	-0.04	1770.00	132572	0.0	21.0	19.60	1	50	Front	10	0.244	1.380	0.337	0.337	0.211		25.7		
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	-0.07	1770.00	132572	0.0	21.0	19.59	50	50	Front	10	0.250	1.384	0.346	0.346	0.216		25.6		
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	0.00	1770.00	132572	0.0	21.0	19.60	1	50	Top	10	0.510	1.380	0.704	0.704	0.440		22.5	22.3	20.0
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	-0.02	1770.00	132572	0.0	21.0	19.59	50	50	Top	10	0.535	1.384	0.740	0.740	0.463	A24	22.3		
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	0.03	1770.00	132572	0.0	21.0	19.60	1	50	Left	10	0.138	1.380	0.190	0.190	0.119		28.2		
Hotspot	LTE Band 66	20	QPSK	F	0124M	1:1	-0.03	1770.00	132572	0.0	21.0	19.59	50	50	Left	10	0.147	1.384	0.203	0.203	0.127		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								

12.10 LTE Band 25 (PCS) Standalone SAR

Table 12-31
LTE Band 25 (PCS) Antenna A Head SAR

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]	Tune state	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	A	0124M	1:1	-0.09	1860.00	26140	0.0	24.0	23.06	1	0	Right Cheek	0	0	0.083	1.242	0.103	0.493	0.308		33.8		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	0.03	1860.00	26140	1.0	23.0	22.00	50	0	Right Cheek	0	0	0.071	1.259	0.089	0.539	0.337		33.4		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	0.02	1860.00	26140	0.0	24.0	23.06	1	0	Right Tilt	0	0	0.052	1.242	0.065	0.309	0.193		35.8		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	0.08	1860.00	26140	1.0	23.0	22.00	50	0	Right Tilt	0	0	0.043	1.259	0.054	0.326	0.204		35.6	30.8	30.8
Head	LTE Band 25	20	QPSK	A	0124M	1:1	-0.18	1860.00	26140	0.0	24.0	23.06	1	0	Left Cheek	0	0	0.129	1.242	0.160	0.767	0.479		31.9		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	0.04	1860.00	26140	1.0	23.0	22.00	50	0	Left Cheek	0	0	0.129	1.259	0.162	0.979	0.612		30.8		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	-0.04	1860.00	26140	0.0	24.0	23.06	1	0	Left Tilt	0	0	0.045	1.242	0.056	0.267	0.167		36.5		
Head	LTE Band 25	20	QPSK	A	0124M	1:1	0.02	1860.00	26140	1.0	23.0	22.00	50	0	Left Tilt	0	0	0.044	1.259	0.055	0.334	0.209		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
LTE Band 25 (PCS) Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	1252M	1:1	0.11	1860.00	26140	0.0	19.0	17.90	1	0	Back	10	0	0.283	1.288	0.365	0.365	0.228	A26	23.3		
Body-worn/Hotspot	LTE Band 25	20	QPSK	A	1252M	1:1	0.08	1860.00	26140	0.0	19.0	17.89	50	0	Back	10	0	0.283	1.291	0.365	0.365	0.228		23.3		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	0.03	1860.00	26140	0.0	19.0	17.90	1	0	Front	10	0	0.243	1.288	0.313	0.313	0.196		24.0		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	0.18	1860.00	26140	0.0	19.0	17.89	50	0	Front	10	0	0.241	1.291	0.311	0.311	0.194		24.0		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	0.01	1860.00	26140	0.0	19.0	17.90	1	0	Bottom	10	0	0.571	1.288	0.735	0.735	0.459	A27	20.3		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	0.00	1860.00	26140	0.0	19.0	17.89	50	0	Bottom	10	0	0.553	1.291	0.714	0.714	0.446		20.4	20.3	18.0
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	-0.19	1860.00	26140	0.0	19.0	17.90	1	0	Right	10	0	0.047	1.288	0.061	0.061	0.038		31.1		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	-0.13	1860.00	26140	0.0	19.0	17.89	50	0	Right	10	0	0.045	1.291	0.058	0.058	0.036		31.3		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	-0.10	1860.00	26140	0.0	19.0	17.90	1	0	Left	10	0	0.049	1.288	0.063	0.063	0.039		30.9		
Hotspot	LTE Band 25	20	QPSK	A	0124M	1:1	0.08	1860.00	26140	0.0	19.0	17.89	50	0	Left	10	0	0.048	1.291	0.062	0.062	0.039		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 12-33
LTE Band 25 (PCS) Antenna F Head SAR

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	F	0124M	1:1	0.06	1860.00	26140	0.0	19.0	17.73	1	0	Right Cheek	0	0.791	1.340	1.060	1.060	0.663	A25	18.7	18.7	18.0
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.09	1882.50	26365	0.0	19.0	17.82	1	50	Right Cheek	0	0.734	1.312	0.963	0.963	0.602		19.1		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.03	1905.00	26590	0.0	19.0	18.12	1	0	Right Cheek	0	0.737	1.225	0.903	0.903	0.564		19.4		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.02	1860.00	26140	0.0	19.0	17.78	50	50	Right Cheek	0	0.756	1.324	1.001	1.001	0.626		18.9		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.01	1882.50	26365	0.0	19.0	17.79	50	50	Right Cheek	0	0.725	1.321	0.958	0.958	0.599		19.1		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1905.00	26590	0.0	19.0	17.88	50	25	Right Cheek	0	0.729	1.294	0.943	0.943	0.589		19.2		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.02	1905.00	26590	0.0	19.0	17.81	100	0	Right Cheek	0	0.729	1.315	0.959	0.959	0.599		19.1		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.02	1860.00	26140	0.0	19.0	17.73	1	0	Right Tilt	0	0.726	1.340	0.973	0.973	0.608		19.1		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1882.50	26365	0.0	19.0	17.82	1	50	Right Tilt	0	0.676	1.312	0.887	0.887	0.554		19.5		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1905.00	26590	0.0	19.0	18.12	1	0	Right Tilt	0	0.698	1.225	0.855	0.855	0.534		19.6		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.01	1860.00	26140	0.0	19.0	17.78	50	50	Right Tilt	0	0.706	1.324	0.935	0.935	0.584		19.2		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1882.50	26365	0.0	19.0	17.79	50	50	Right Tilt	0	0.685	1.321	0.905	0.905	0.566		19.4		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.01	1905.00	26590	0.0	19.0	17.88	50	25	Right Tilt	0	0.701	1.294	0.907	0.907	0.567		19.4		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.01	1905.00	26590	0.0	19.0	17.81	100	0	Right Tilt	0	0.703	1.315	0.924	0.924	0.578		19.3		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1905.00	26590	0.0	19.0	18.12	1	0	Left Cheek	0	0.475	1.225	0.582	0.582	0.364		21.3		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	0.06	1905.00	26590	0.0	19.0	17.88	50	25	Left Cheek	0	0.515	1.294	0.666	0.666	0.416		20.7		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	-0.03	1905.00	26590	0.0	19.0	18.12	1	0	Left Tilt	0	0.564	1.225	0.691	0.691	0.432		20.6		
Head	LTE Band 25	20	QPSK	F	0124M	1:1	-0.03	1905.00	26590	0.0	19.0	17.88	50	25	Left Tilt	0	0.571	1.294	0.739	0.739	0.462		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 12-34
LTE Band 25 (PCS) Antenna F Body-worn/Hotspot SAR

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	F	0124M	1:1	0.00	1860.00	26140	0.0	21.0	20.05	1	99	Back	10	0.200	1.245	0.249	0.249	0.156		27.0	22.5	20.0
Body-worn/Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	-0.01	1860.00	26140	0.0	21.0	20.00	50	25	Back	10	0.214	1.259	0.269	0.269	0.168		26.6		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	-0.13	1860.00	26140	0.0	21.0	20.05	1	99	Front	10	0.214	1.245	0.266	0.266	0.166		26.7		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	-0.08	1860.00	26140	0.0	21.0	20.00	50	25	Front	10	0.224	1.259	0.282	0.282	0.176		26.4		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	-0.03	1860.00	26140	0.0	21.0	20.05	1	99	Top	10	0.530	1.245	0.660	0.660	0.413		22.8		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1860.00	26140	0.0	21.0	20.00	50	25	Top	10	0.555	1.259	0.699	0.699	0.437		22.5		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	0.00	1860.00	26140	0.0	21.0	20.05	1	99	Left	10	0.130	1.245	0.162	0.162	0.101		28.9		
Hotspot	LTE Band 25	20	QPSK	F	0124M	1:1	0.04	1860.00	26140	0.0	21.0	20.00	50	25	Left	10	0.134	1.259	0.169	0.169	0.106		28.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.11 LTE Band 41 Standalone SAR

Table 12-35
LTE Band 41 Antenna B Head SAR

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	B	0167M	1:1.58	0.00	2593.00	40620	0.0	25.0	23.88	1	99	Right Cheek	0	0.019	1.294	0.025	0.364	0.228		39.1	34.7	34.7
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.03	2593.00	40620	1.0	24.0	23.01	50	50	Right Cheek	0	0.013	1.256	0.016	0.304	0.190		39.8		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.18	2593.00	40620	0.0	25.0	23.88	1	99	Right Tilt	0	0.019	1.294	0.025	0.364	0.228		39.1		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.20	2593.00	40620	1.0	24.0	23.01	50	50	Right Tilt	0	0.015	1.256	0.019	0.351	0.219		39.2		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.11	2593.00	40620	0.0	25.0	23.88	1	99	Left Cheek	0	0.052	1.294	0.067	0.995	0.622		34.7		
Head	LTE Band 41	20	QPSK	B	0167M	1:2.31	0.09	2593.00	40620	0.0	26.1	24.81	1	99	Left Cheek	0	0.042	1.346	0.057	0.938	0.586		34.9		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.18	2593.00	40620	1.0	24.0	23.01	50	50	Left Cheek	0	0.037	1.256	0.046	0.865	0.541		35.3		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.18	2593.00	40620	0.0	25.0	23.88	1	99	Left Tilt	0	0.017	1.294	0.022	0.325	0.203		39.5		
Head	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.02	2593.00	40620	1.0	24.0	23.01	50	50	Left Tilt	0	0.014	1.256	0.018	0.327	0.204		39.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																	Head 1.6 W/kg (mW/g) averaged over 1 gram								

Note: Green entry represents HPUE measurement

Table 12-36
LTE Band 41 Antenna B Body-worn/Hotspot SAR

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	B	0167M	1:1.58	0.18	2506.00	39750	0.0	22.5	22.07	1	99	Back	10	0.258	1.104	0.285	0.285	0.178		25.9	25.7	19.5
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	0167M	1:2.31	0.12	2506.00	39750	0.0	24.1	23.90	1	99	Back	10	0.286	1.047	0.299	0.299	0.187	A29	25.7		
Body-worn/Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.05	2506.00	39750	0.0	22.5	22.16	50	50	Back	10	0.261	1.081	0.282	0.282	0.176		26.0		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.01	2506.00	39750	0.0	22.5	22.07	1	99	Front	10	0.147	1.104	0.162	0.162	0.101		28.4		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.00	2506.00	39750	0.0	22.5	22.16	50	50	Front	10	0.146	1.081	0.158	0.158	0.099		28.5		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.01	2506.00	39750	0.0	22.5	22.07	1	99	Bottom	10	0.211	1.104	0.233	0.233	0.146		26.8		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.02	2506.00	39750	0.0	22.5	22.16	50	50	Bottom	10	0.205	1.081	0.222	0.222	0.139		27.0		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	-0.04	2506.00	39750	0.0	22.5	22.07	1	99	Left	10	0.254	1.104	0.280	0.280	0.175		26.0		
Hotspot	LTE Band 41	20	QPSK	B	0167M	1:1.58	0.08	2506.00	39750	0.0	22.5	22.16	50	50	Left	10	0.260	1.081	0.281	0.281	0.176		26.0		
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 12-37
LTE Band 41 Antenna F Head SAR

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	F	0167M	1:1.58	0.02	2506.00	39750	0.0	17.5	16.44	1	50	Right Cheek	0	0.358	1.276	0.457	0.457	0.286		18.9		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.02	2506.00	39750	0.0	17.5	16.55	50	0	Right Cheek	0	0.358	1.245	0.446	0.446	0.279		19.0		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.04	2506.00	39750	0.0	17.5	16.44	1	50	Right Tilt	0	0.541	1.276	0.690	0.690	0.431		17.1		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.02	2549.50	40185	0.0	17.5	16.07	1	0	Right Tilt	0	0.458	1.390	0.637	0.637	0.398		17.4		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.02	2593.00	40620	0.0	17.5	16.13	1	50	Right Tilt	0	0.503	1.371	0.690	0.690	0.431		17.1		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.03	2636.50	41055	0.0	17.5	15.98	1	50	Right Tilt	0	0.439	1.419	0.623	0.623	0.389		17.5		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.00	2680.00	41490	0.0	17.5	15.95	1	50	Right Tilt	0	0.486	1.429	0.694	0.694	0.434		17.0		
Head	LTE Band 41	20	QPSK	F	0167M	1:2.31	-0.04	2680.00	41490	0.0	19.1	17.61	1	50	Right Tilt	0	0.497	1.409	0.700	0.700	0.438		17.0		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.03	2506.00	39750	0.0	17.5	16.55	50	0	Right Tilt	0	0.553	1.245	0.688	0.688	0.430	A28	17.1	17.0	14.5
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.04	2549.50	40185	0.0	17.5	16.11	50	0	Right Tilt	0	0.470	1.377	0.647	0.647	0.404		17.4		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.02	2593.00	40620	0.0	17.5	16.09	50	0	Right Tilt	0	0.498	1.384	0.689	0.689	0.431		17.1		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.01	2636.50	41055	0.0	17.5	16.11	50	25	Right Tilt	0	0.451	1.377	0.621	0.621	0.388		17.5		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.03	2680.00	41490	0.0	17.5	16.08	50	25	Right Tilt	0	0.495	1.387	0.687	0.687	0.429		17.1		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.08	2506.00	39750	0.0	17.5	16.44	1	50	Left Cheek	0	0.229	1.276	0.292	0.292	0.183		20.8		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.05	2506.00	39750	0.0	17.5	16.55	50	0	Left Cheek	0	0.230	1.245	0.286	0.286	0.179		20.9		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.01	2506.00	39750	0.0	17.5	16.44	1	50	Left Tilt	0	0.220	1.276	0.281	0.281	0.176		21.0		
Head	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.08	2506.00	39750	0.0	17.5	16.55	50	0	Left Tilt	0	0.220	1.245	0.274	0.274	0.171		21.1		
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 12-38
LTE Band 41 Antenna F Body-worn/Hotspot SAR

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	F	0167M	1:1.58	-0.02	2506.00	39750	0.0	22.0	21.01	1	50	Back	10	0.157	1.256	0.197	0.197	0.123		27.0		
Body-worn/Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.01	2506.00	39750	0.0	22.0	21.05	50	0	Back	10	0.161	1.245	0.200	0.200	0.125		26.9		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.03	2506.00	39750	0.0	22.0	21.01	1	50	Front	10	0.179	1.256	0.225	0.225	0.141		26.4		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.01	2506.00	39750	0.0	22.0	21.05	50	0	Front	10	0.176	1.245	0.219	0.219	0.137		26.6		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	0.01	2506.00	39750	0.0	22.0	21.01	1	50	Top	10	0.322	1.256	0.404	0.404	0.253		23.9	23.7	19.0
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.02	2506.00	39750	0.0	22.0	21.05	50	0	Top	10	0.338	1.245	0.421	0.421	0.263	A30	23.7		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:2.31	0.00	2506.00	39750	0.0	23.6	22.61	50	0	Top	10	0.318	1.256	0.399	0.399	0.249		23.9		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.05	2506.00	39750	0.0	22.0	21.01	1	50	Left	10	0.045	1.256	0.057	0.057	0.036		32.4		
Hotspot	LTE Band 41	20	QPSK	F	0167M	1:1.58	-0.04	2506.00	39750	0.0	22.0	21.05	50	0	Left	10	0.043	1.245	0.054	0.054	0.034		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										

12.12 NR Band n5 Standalone SAR

Table 12-39
NR Band n5 Ant A Head SAR

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]	Tune state	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	A	0149M	1:1	-0.11	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Right Cheek	0	3	0.131	1.140	0.149	0.149	0.093		32.2		
Head	NR Band n5	20	QPSK	A	0149M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Right Cheek	0	3	0.127	1.151	0.146	0.146	0.091		32.3		
Head	NR Band n5	20	QPSK	A	0149M	1:1	-0.03	836.50	167300	CP-OFDM	0.5	23.5	22.09	1	1	Right Cheek	0	3	0.078	1.384	0.108	0.108	0.068		33.1		
Head	NR Band n5	20	QPSK	A	0149M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Right Tilt	0	3	0.070	1.140	0.080	0.080	0.050		34.9		
Head	NR Band n5	20	QPSK	A	0149M	1:1	0.02	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Right Tilt	0	3	0.068	1.151	0.078	0.078	0.049		35.0	32.2	23.0
Head	NR Band n5	20	QPSK	A	0149M	1:1	0.08	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Left Cheek	0	3	0.103	1.140	0.117	0.117	0.073		33.3		
Head	NR Band n5	20	QPSK	A	0149M	1:1	0.00	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Left Cheek	0	3	0.102	1.151	0.117	0.117	0.073		33.3		
Head	NR Band n5	20	QPSK	A	0149M	1:1	-0.20	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Left Tilt	0	3	0.068	1.140	0.078	0.078	0.049		35.1		
Head	NR Band n5	20	QPSK	A	0149M	1:1	-0.06	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Left Tilt	0	3	0.067	1.151	0.077	0.077	0.048		35.1		
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 12-40
NR Band n5 Ant A Body-worn/Hotspot SAR

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]	Tune state	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	A	0149M	1:1	0.06	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Back	10	4	0.202	1.140	0.230	0.230	0.144		30.3		
Body-worn/Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	0.15	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Back	10	4	0.222	1.151	0.256	0.256	0.160		29.9		
Body-worn/Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.01	836.50	167300	CP-OFDM	0.5	23.5	22.09	1	1	Back	10	4	0.141	1.394	0.195	0.195	0.122		30.5		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Front	10	1	0.156	1.140	0.178	0.178	0.111		31.4		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.05	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Front	10	1	0.165	1.151	0.190	0.190	0.119		31.2		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	0.05	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Bottom	10	3	0.071	1.140	0.081	0.081	0.051		34.9	29.9	23.0
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.07	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Bottom	10	3	0.084	1.151	0.097	0.097	0.061		34.1		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Right	10	4	0.131	1.140	0.149	0.149	0.093		32.2		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.08	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Right	10	4	0.117	1.151	0.135	0.135	0.084		32.7		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	-0.11	836.50	167300	DFT-s-OFDM	0.0	24.0	23.43	1	1	Left	10	4	0.155	1.140	0.177	0.177	0.111		31.5		
Hotspot	NR Band n5	20	QPSK	A	0149M	1:1	0.00	836.50	167300	DFT-s-OFDM	0.0	24.0	23.39	50	28	Left	10	4	0.136	1.151	0.157	0.157	0.098		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										

Table 12-41
NR Band n5 Antenna E Head SAR

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	E	0149M	1:1	-0.06	836.50	167300	DFT-s-OFDM	0.0	22.0	20.15	1	53	Right Cheek	0	0.579	1.531	0.886	0.886	0.554		22.5	21.4	21.0
Head	NR Band n5	20	QPSK	E	0149M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	22.0	20.14	50	56	Right Cheek	0	0.567	1.535	0.870	0.870	0.544		22.6		
Head	NR Band n5	20	QPSK	E	0149M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	22.0	20.08	100	0	Right Cheek	0	0.544	1.556	0.846	0.846	0.529		22.7		
Head	NR Band n5	20	QPSK	E	0149M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.15	1	53	Right Tilt	0	0.458	1.531	0.701	0.701	0.438		23.5		
Head	NR Band n5	20	QPSK	E	0149M	1:1	0.03	836.50	167300	DFT-s-OFDM	0.0	22.0	20.14	50	56	Right Tilt	0	0.518	1.535	0.795	0.795	0.497		22.9		
Head	NR Band n5	20	QPSK	E	0146M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	22.0	20.15	1	53	Left Cheek	0	0.724	1.531	1.108	1.108	0.693	A31	21.5		
Head	NR Band n5	20	QPSK	E	0146M	1:1	0.05	836.50	167300	DFT-s-OFDM	0.0	22.0	20.14	50	56	Left Cheek	0	0.707	1.535	1.085	1.085	0.678		21.6		
Head	NR Band n5	20	QPSK	E	0146M	1:1	0.00	836.50	167300	DFT-s-OFDM	0.0	22.0	20.08	100	0	Left Cheek	0	0.722	1.556	1.123	1.123	0.702		21.4		
Head	NR Band n5	20	QPSK	E	0146M	1:1	-0.05	836.50	167300	CP-OFDM	0.0	22.0	20.25	1	1	Left Cheek	0	0.723	1.496	1.082	1.082	0.676		21.6		
Head	NR Band n5	20	QPSK	E	0146M	1:1	-0.08	836.50	167300	DFT-s-OFDM	0.0	22.0	20.15	1	53	Left Tilt	0	0.660	1.531	1.010	1.010	0.631		21.9		
Head	NR Band n5	20	QPSK	E	0146M	1:1	-0.05	836.50	167300	DFT-s-OFDM	0.0	22.0	20.14	50	56	Left Tilt	0	0.557	1.535	0.855	0.855	0.534		22.6		
Head	NR Band n5	20	QPSK	E	0146M	1:1	-0.05	836.50	167300	DFT-s-OFDM	0.0	22.0	20.08	100	0	Left Tilt	0	0.592	1.556	0.921	0.921	0.576		22.3		
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
NR Band n5 Antenna E Body-worn/Hotspot SAR

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	E	0146M	1:1	-0.11	836.50	167300	DFT-s-OFDM	0.0	24.0	23.15	1	1	Back	10	0.331	1.216	0.402	0.402	0.251	A32	27.9	26.8	23.0
Body-worn/Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.04	836.50	167300	DFT-s-OFDM	0.0	24.0	23.08	50	28	Back	10	0.273	1.236	0.337	0.337	0.211		28.7		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.01	836.50	167300	DFT-s-OFDM	0.0	24.0	23.15	1	1	Front	10	0.385	1.216	0.468	0.468	0.293		27.2		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.08	836.50	167300	DFT-s-OFDM	0.0	24.0	23.08	50	28	Front	10	0.305	1.236	0.377	0.377	0.236		28.2		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.02	836.50	167300	DFT-s-OFDM	0.0	24.0	23.15	1	1	Top	10	0.429	1.216	0.522	0.522	0.326	A33	26.8		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	0.08	836.50	167300	DFT-s-OFDM	0.0	24.0	23.08	50	28	Top	10	0.354	1.236	0.438	0.438	0.274		27.5		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.04	836.50	167300	CP-OFDM	0.5	23.5	21.82	1	1	Top	10	0.299	1.472	0.440	0.440	0.275		27.0		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	-0.03	836.50	167300	DFT-s-OFDM	0.0	24.0	23.15	1	1	Right	10	0.413	1.216	0.502	0.502	0.314		26.9		
Hotspot	NR Band n5	20	QPSK	E	0146M	1:1	0.04	836.50	167300	DFT-s-OFDM	0.0	24.0	23.08	50	28	Right	10	0.296	1.236	0.366	0.366	0.229		28.3		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.13 NR Band n66 Standalone SAR

Table 12-42
NR Band n66 Antenna A Head SAR

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]	Tune state	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	45	QPSK	A	0149M	1:1	0.09	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.46	1	1	Right Cheek	0	56	0.075	1.132	0.085	0.085	0.053		34.7	31.4	23.0
Head	NR Band n66	45	QPSK	A	0149M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.25	120	61	Right Cheek	0	56	0.069	1.189	0.082	0.082	0.051		34.8		
Head	NR Band n66	45	QPSK	A	0149M	1:1	0.04	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.46	1	1	Right Tilt	0	55	0.046	1.132	0.052	0.052	0.033		36.8		
Head	NR Band n66	45	QPSK	A	0149M	1:1	-0.09	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.25	120	61	Right Tilt	0	55	0.059	1.189	0.070	0.070	0.044		35.5		
Head	NR Band n66	45	QPSK	A	0149M	1:1	-0.12	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.46	1	1	Left Cheek	0	55	0.154	1.132	0.174	0.174	0.109		31.5		
Head	NR Band n66	45	QPSK	A	0149M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.25	120	61	Left Cheek	0	55	0.143	1.189	0.170	0.170	0.106		31.6		
Head	NR Band n66	45	QPSK	A	0143M	1:1	-0.19	1745.00	349000	CP-OFDM	1.0	23.0	22.03	1	1	Left Cheek	0	64	0.115	1.250	0.144	0.144	0.090		31.4		
Head	NR Band n66	45	QPSK	A	0149M	1:1	-0.04	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.46	1	1	Left Tilt	0	55	0.051	1.132	0.058	0.058	0.036		36.3		
Head	NR Band n66	45	QPSK	A	0149M	1:1	0.09	1745.00	349000	DFT-s-OFDM	0.0	24.0	23.25	120	61	Left Tilt	0	55	0.046	1.189	0.055	0.055	0.034		36.6		
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 12-43
NR Band n66 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	45	QPSK	A	0143M	1:1	-0.11	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.44	1	1	Back	10	55	0.330	1.276	0.421	0.421	0.263		23.2	19.8	18.5
Body-worn/Hotspot	NR Band n66	45	QPSK	A	0143M	1:1	-0.13	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.25	120	0	Back	10	55	0.339	1.334	0.452	0.452	0.283	A35	22.9		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	-0.11	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.44	1	1	Front	10	55	0.320	1.276	0.408	0.408	0.255		23.3		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	-0.04	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.25	120	0	Front	10	55	0.322	1.334	0.430	0.430	0.269		23.1		
Hotspot	NR Band n66	45	QPSK	A	0143M	1:1	0.07	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.44	1	1	Bottom	10	55	0.663	1.276	0.846	0.846	0.529		20.2		
Hotspot	NR Band n66	45	QPSK	A	0143M	1:1	-0.10	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.25	120	0	Bottom	10	55	0.662	1.334	0.883	0.883	0.552		20.0		
Hotspot	NR Band n66	45	QPSK	A	0143M	1:1	-0.10	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.18	240	0	Bottom	10	55	0.687	1.355	0.931	0.931	0.582	A36	19.8		
Hotspot	NR Band n66	45	QPSK	A	0143M	1:1	-0.01	1745.00	349000	CP-OFDM	0.0	19.5	18.54	1	1	Bottom	10	55	0.646	1.247	0.806	0.806	0.504		20.4		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	0.08	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.44	1	1	Right	10	11	0.058	1.276	0.074	0.074	0.046		30.8		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	0.08	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.25	120	0	Right	10	11	0.055	1.334	0.073	0.073	0.046		30.8		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	-0.15	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.44	1	1	Left	10	55	0.073	1.276	0.093	0.093	0.058		29.8		
Hotspot	NR Band n66	45	QPSK	A	0146M	1:1	0.05	1745.00	349000	DFT-s-OFDM	0.0	19.5	18.25	120	0	Left	10	55	0.076	1.334	0.101	0.101	0.063		29.4		
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 12-44
NR Band n66 Antenna F Head SAR

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	45	QPSK	F	0149M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.75	1	240	Right Cheek	0	0.686	1.334	0.915	0.915	0.572		19.3	18.8	18.0
Head	NR Band n66	45	QPSK	F	0149M	1:1	0.06	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.69	120	0	Right Cheek	0	0.663	1.352	0.896	0.896	0.560		19.4		
Head	NR Band n66	45	QPSK	F	0149M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.62	240	0	Right Cheek	0	0.669	1.374	0.919	0.919	0.574		19.3		
Head	NR Band n66	45	QPSK	F	0149M	1:1	-0.12	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.75	1	240	Right Tilt	0	0.749	1.334	0.999	0.999	0.624		19.0		
Head	NR Band n66	45	QPSK	F	0149M	1:1	-0.08	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.69	120	0	Right Tilt	0	0.752	1.352	1.017	1.017	0.636		18.9		
Head	NR Band n66	45	QPSK	F	0149M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.62	240	0	Right Tilt	0	0.756	1.374	1.039	1.039	0.649		18.8		
Head	NR Band n66	45	QPSK	F	0149M	1:1	0.17	1745.00	349000	CP-OFDM	0.0	19.0	17.75	1	1	Right Tilt	0	0.774	1.334	1.033	1.033	0.646	A34	18.8		
Head	NR Band n66	45	QPSK	F	0174M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.75	1	240	Left Cheek	0	0.453	1.334	0.604	0.604	0.378		21.1		
Head	NR Band n66	45	QPSK	F	0174M	1:1	0.13	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.69	120	0	Left Cheek	0	0.476	1.352	0.644	0.644	0.403		20.9		
Head	NR Band n66	45	QPSK	F	0174M	1:1	0.07	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.75	1	240	Left Tilt	0	0.640	1.334	0.854	0.854	0.534		19.6		
Head	NR Band n66	45	QPSK	F	0174M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.69	120	0	Left Tilt	0	0.638	1.352	0.863	0.863	0.539		19.6		
Head	NR Band n66	45	QPSK	F	0174M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	19.0	17.62	240	0	Left Tilt	0	0.613	1.374	0.842	0.842	0.526		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								

Table 12-45
NR Band n66 Antenna F Body-worn/Hotspot SAR

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	45	QPSK	F	0149M	1:1	0.03	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.76	1	1	Back	10	0.210	1.330	0.279	0.279	0.174		26.5		
Body-worn/Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	0.01	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.77	120	61	Back	10	0.228	1.327	0.303	0.303	0.189		26.1		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	-0.02	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.76	1	1	Front	10	0.199	1.330	0.265	0.265	0.166		26.7		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.77	120	61	Front	10	0.203	1.327	0.269	0.269	0.168		26.6		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	-0.09	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.76	1	1	Top	10	0.641	1.330	0.853	0.853	0.533		21.6	21.5	20.0
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	0.02	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.77	120	61	Top	10	0.646	1.327	0.857	0.857	0.536		21.6		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	0.00	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.64	240	0	Top	10	0.647	1.368	0.885	0.885	0.553		21.5		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	0.00	1745.00	349000	CP-OFDM	0.0	21.0	19.72	1	1	Top	10	0.663	1.343	0.890	0.890	0.556		21.5		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	-0.06	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.76	1	1	Left	10	0.099	1.330	0.132	0.132	0.083		29.8		
Hotspot	NR Band n66	45	QPSK	F	0149M	1:1	-0.03	1745.00	349000	DFT-s-OFDM	0.0	21.0	19.77	120	61	Left	10	0.101	1.327	0.134	0.134	0.084		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								

12.14 NR Band n25 Standalone SAR

Table 12-46
NR Band n25 Antenna A Head SAR

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]	Tune state	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	A	0149M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.74	1	214	Right Cheek	0	19	0.059	1.500	0.089	0.329	0.206		35.0		
Head	NR Band n25	40	QPSK	A	0149M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.66	108	54	Right Cheek	0	19	0.079	1.528	0.121	0.448	0.280		33.6		
Head	NR Band n25	40	QPSK	A	0149M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.74	1	214	Right Tilt	0	19	0.033	1.500	0.050	0.184	0.115		37.5		
Head	NR Band n25	40	QPSK	A	0149M	1:1	0.04	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.66	108	54	Right Tilt	0	19	0.050	1.528	0.076	0.284	0.178		35.6		
Head	NR Band n25	40	QPSK	A	0149M	1:1	0.06	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.74	1	214	Left Cheek	0	0	0.151	1.500	0.227	0.841	0.526		30.9	30.2	30.2
Head	NR Band n25	40	QPSK	A	0149M	1:1	-0.10	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.66	108	54	Left Cheek	0	0	0.170	1.528	0.260	0.965	0.603		30.3		
Head	NR Band n25	40	QPSK	A	0143M	1:1	0.18	1882.50	376500	CP-OFDM	1.5	23.0	21.21	1	1	Left Cheek	0	6	0.125	1.510	0.189	0.991	0.619		30.2		
Head	NR Band n25	40	QPSK	A	0149M	1:1	0.03	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.74	1	214	Left Tilt	0	17	0.022	1.500	0.033	0.123	0.077		39.3		
Head	NR Band n25	40	QPSK	A	0149M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	24.5	22.66	108	54	Left Tilt	0	17	0.034	1.528	0.052	0.193	0.123		37.3		
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 12-47
NR Band n25 Antenna A Body-worn/Hotspot SAR

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]	Tune state	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	A	0143M	1:1	-0.17	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.64	1	214	Back	10	0	0.276	1.368	0.378	0.378	0.236	A38	23.2		
Body-worn/Hotspot	NR Band n25	40	QPSK	A	0143M	1:1	-0.20	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.49	108	54	Back	10	0	0.270	1.416	0.382	0.382	0.239		23.1		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.64	1	214	Front	10	19	0.308	1.368	0.421	0.421	0.263		22.7		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	-0.09	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.49	108	54	Front	10	19	0.298	1.416	0.422	0.422	0.264		22.7		
Hotspot	NR Band n25	40	QPSK	A	0143M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.64	1	214	Bottom	10	9	0.694	1.368	0.949	0.949	0.593		19.2		
Hotspot	NR Band n25	40	QPSK	A	0143M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.49	108	54	Bottom	10	9	0.665	1.416	0.942	0.942	0.589		19.2		
Hotspot	NR Band n25	40	QPSK	A	0143M	1:1	-0.08	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.48	216	0	Bottom	10	9	0.605	1.419	0.858	0.858	0.536		19.6		
Hotspot	NR Band n25	40	QPSK	A	0143M	1:1	-0.03	1882.50	376500	CP-OFDM	0.0	19.0	17.66	1	1	Bottom	10	9	0.645	1.361	0.878	0.878	0.549		19.5		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	0.08	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.64	1	214	Right	10	17	0.038	1.368	0.052	0.052	0.033		31.8		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	0.05	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.49	108	54	Right	10	17	0.042	1.416	0.059	0.059	0.037		31.2		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	0.09	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.64	1	214	Left	10	18	0.045	1.368	0.062	0.062	0.039		31.1		
Hotspot	NR Band n25	40	QPSK	A	0146M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.49	108	54	Left	10	18	0.055	1.416	0.078	0.078	0.049		30.0		
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 12-48
NR Band n25 Antenna F Head SAR

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	F	0149M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.87	1	1	Right Cheek	0	0.643	1.297	0.834	0.834	0.521		19.7		
Head	NR Band n25	40	QPSK	F	0149M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.83	108	54	Right Cheek	0	0.665	1.309	0.870	0.870	0.544		19.6		
Head	NR Band n25	40	QPSK	F	0149M	1:1	0.12	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.82	216	0	Right Cheek	0	0.688	1.312	0.903	0.903	0.564		19.4		
Head	NR Band n25	40	QPSK	F	0149M	1:1	0.01	1882.50	376500	CP-OFDM	0.0	19.0	17.97	1	1	Right Cheek	0	0.722	1.268	0.915	0.915	0.572	A37	19.3		
Head	NR Band n25	40	QPSK	F	0149M	1:1	-0.05	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.87	1	1	Right Tilt	0	0.642	1.297	0.833	0.833	0.521		19.7		
Head	NR Band n25	40	QPSK	F	0149M	1:1	-0.01	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.83	108	54	Right Tilt	0	0.664	1.309	0.869	0.869	0.543		19.6	19.3	18.0
Head	NR Band n25	40	QPSK	F	0149M	1:1	0.04	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.82	216	0	Right Tilt	0	0.669	1.312	0.878	0.878	0.549		19.5		
Head	NR Band n25	40	QPSK	F	0174M	1:1	0.04	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.87	1	1	Left Cheek	0	0.380	1.297	0.493	0.493	0.308		22.0		
Head	NR Band n25	40	QPSK	F	0174M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.83	108	54	Left Cheek	0	0.405	1.309	0.530	0.530	0.331		21.7		
Head	NR Band n25	40	QPSK	F	0174M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.87	1	1	Left Tilt	0	0.448	1.297	0.581	0.581	0.363		21.3		
Head	NR Band n25	40	QPSK	F	0174M	1:1	0.03	1882.50	376500	DFT-s-OFDM	0.0	19.0	17.83	108	54	Left Tilt	0	0.487	1.309	0.637	0.637	0.398		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 12-49
NR Band n25 Antenna F Body-worn/Hotspot SAR

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	F	0149M	1:1	-0.07	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.04	1	1	Back	10	0.199	1.247	0.248	0.248	0.155		27.0		
Body-worn/Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	-0.06	1882.50	376500	DFT-s-OFDM	0.0	21.0	19.98	108	54	Back	10	0.197	1.265	0.249	0.249	0.156		27.0		
Body-worn/Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.01	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.04	1	1	Front	10	0.206	1.247	0.257	0.257	0.161		26.9		
Body-worn/Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	21.0	19.98	108	54	Front	10	0.200	1.265	0.253	0.253	0.158		26.9		
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	-0.02	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.04	1	1	Top	10	0.713	1.247	0.889	0.889	0.556		21.5		
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.02	1882.50	376500	DFT-s-OFDM	0.0	21.0	19.98	108	54	Top	10	0.709	1.265	0.897	0.897	0.561		21.4	21.4	20.0
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	21.0	19.94	216	0	Top	10	0.702	1.276	0.896	0.896	0.560		21.4		
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.00	1882.50	376500	CP-OFDM	0.0	21.0	20.13	1	1	Top	10	0.728	1.222	0.890	0.890	0.556	A39	21.5		
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.03	1882.50	376500	DFT-s-OFDM	0.0	21.0	20.04	1	1	Left	10	0.127	1.247	0.158	0.158	0.099		29.0		
Hotspot	NR Band n25	40	QPSK	F	0149M	1:1	0.00	1882.50	376500	DFT-s-OFDM	0.0	21.0	19.98	108	54	Left	10	0.124	1.265	0.157	0.157	0.098		29.0		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																		Body 1.6 W/kg (mW/g) averaged over 1 gram								

12.15 NR Band n41 Standalone SAR

Table 12-50
NR Band n41 Antenna F Head SAR

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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	F	1	0167M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.58	1	1	Right Cheek	0	0.550	1.556	0.856	0.856	0.535		19.1		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.52	135	69	Right Cheek	0	0.550	1.578	0.868	0.868	0.543		19.1		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.04	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.50	270	0	Right Cheek	0	0.548	1.585	0.869	0.869	0.543		19.1		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.58	1	1	Right Tilt	0	0.559	1.556	0.870	0.870	0.544		19.1		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.00	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.52	135	69	Right Tilt	0	0.574	1.578	0.906	0.906	0.566		18.9		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.50	270	0	Right Tilt	0	0.613	1.585	0.972	0.972	0.608	A40	18.6	18.6	17.5
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.01	2592.99	518598	CP-OFDM	0.0	18.5	16.51	1	1	Right Tilt	0	0.611	1.581	0.966	0.966	0.604		18.6		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.58	1	1	Left Cheek	0	0.226	1.556	0.352	0.352	0.220		23.0		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.07	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.52	135	69	Left Cheek	0	0.219	1.578	0.346	0.346	0.216		23.1		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.58	1	1	Left Tilt	0	0.390	1.556	0.607	0.607	0.379		20.6		
Head	NR Band n41	100	QPSK	F	1	0167M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	18.5	16.52	135	69	Left Tilt	0	0.377	1.578	0.595	0.595	0.372		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 12-51
NR Band n41 Antenna F Body-worn/Hotspot SAR

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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	F	1	0167M	1:1	-0.11	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.04	1	1	Back	10	0.127	1.570	0.199	0.199	0.124	A41	26.0		
Body-worn/Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.06	135	69	Back	10	0.127	1.563	0.199	0.199	0.124		26.0		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.04	1	1	Front	10	0.095	1.570	0.149	0.149	0.093		27.2		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.08	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.06	135	69	Front	10	0.095	1.563	0.148	0.148	0.093		27.2		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.09	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.04	1	1	Top	10	0.210	1.570	0.330	0.330	0.206		23.8	23.6	18.0
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.06	135	69	Top	10	0.221	1.563	0.345	0.345	0.216	A42	23.6		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.01	2592.99	518598	CP-OFDM	0.0	19.0	17.03	1	1	Top	10	0.210	1.574	0.331	0.331	0.207		23.8		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	-0.19	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.04	1	1	Left	10	0.032	1.570	0.050	0.050	0.031		31.9		
Hotspot	NR Band n41	100	QPSK	F	1	0167M	1:1	0.08	2592.99	518598	DFT-s-OFDM	0.0	19.0	17.06	135	69	Left	10	0.027	1.563	0.042	0.042	0.026		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										

Table 12-52
NR Band n41 Antenna B Head SAR

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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	B	2	0524M	1:1	0.09	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.92	1	137	Right Cheek	0	0.000	1.143	0.000	0.000	0.000		53.9		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.90	135	138	Right Cheek	0	0.000	1.148	0.000	0.000	0.000		53.8		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.09	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.92	1	137	Right Tilt	0	0.000	1.143	0.000	0.000	0.000		53.9		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.90	135	138	Right Tilt	0	0.000	1.148	0.000	0.000	0.000		53.8		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.04	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.92	1	137	Left Cheek	0	0.006	1.143	0.007	0.007	0.004		36.1	34.8	13.5
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.16	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.90	135	138	Left Cheek	0	0.008	1.148	0.009	0.009	0.006		34.8		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.01	2592.99	518598	CP-OFDM	0.0	14.5	13.67	1	1	Left Cheek	0	0.000	1.211	0.000	0.000	0.000		53.6		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.02	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.92	1	137	Left Tilt	0	0.000	1.143	0.000	0.000	0.000		53.9		
Head	NR Band n41	100	QPSK	B	2	0524M	1:1	0.01	2592.99	518598	DFT-s-OFDM	0.0	14.5	13.90	135	138	Left Tilt	0	0.000	1.148	0.000	0.000	0.000		53.8		
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 12-53
NR Band n41 Antenna B Body-worn/Hotspot SAR

Exposure	Band / Mode	Bandwidth [MHz]	Service / Modulation	Ant.	Path	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	B	2	0524M	1:1	-0.10	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.46	1	137	Back	10	0.050	1.132	0.057	0.057	0.036		27.4		
Body-worn/Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	-0.11	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.44	135	138	Back	10	0.052	1.138	0.059	0.059	0.037		27.2		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	0.05	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.46	1	137	Front	10	0.035	1.132	0.040	0.040	0.025		29.0		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.44	135	138	Front	10	0.037	1.138	0.042	0.042	0.026		28.7		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	0.03	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.46	1	137	Bottom	10	0.054	1.132	0.061	0.061	0.038		27.1	26.3	14.0
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	0.09	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.44	135	138	Bottom	10	0.065	1.138	0.074	0.074	0.046		26.3		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	-0.01	2592.99	518598	CP-OFDM	0.0	15.0	14.30	1	1	Bottom	10	0.040	1.175	0.047	0.047	0.029		28.2		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	-0.21	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.46	1	137	Left	10	0.031	1.132	0.035	0.035	0.022		29.5		
Hotspot	NR Band n41	100	QPSK	B	2	0524M	1:1	-0.03	2592.99	518598	DFT-s-OFDM	0.0	15.0	14.44	135	138	Left	10	0.043	1.138	0.049	0.049	0.031		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 12-54
NR Band n41 Antenna E Head SAR

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	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 n41	100	E	1	0167M	1:1	0.01	2592.99	518598	CW/SRS	14.0	13.67	Right Cheek	0	0.057	1.079	0.062	0.062	0.039		26.1		
Head	NR Band n41	100	E	1	0167M	1:1	0.06	2592.99	518598	CW/SRS	14.0	13.67	Right Tilt	0	0.061	1.079	0.066	0.066	0.041		25.8	22.5	13.0
Head	NR Band n41	100	E	1	0167M	1:1	0.16	2592.99	518598	CW/SRS	14.0	13.67	Left Cheek	0	0.106	1.079	0.114	0.114	0.071		23.4		
Head	NR Band n41	100	E	1	0167M	1:1	0.02	2592.99	518598	CW/SRS	14.0	13.67	Left Tilt	0	0.129	1.079	0.139	0.139	0.087		22.5		
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 12-55
NR Band n41 Antenna E Body-worn/Hotspot SAR

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	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 n41	100	E	1	0167M	1:1	0.01	2592.99	518598	CW/SRS	14.5	14.18	Back	10	0.024	1.076	0.026	0.026	0.016		30.3	29.8	13.5
Hotspot	NR Band n41	100	E	1	0167M	1:1	-0.16	2592.99	518598	CW/SRS	14.5	14.18	Front	10	0.022	1.076	0.024	0.024	0.015		30.7		
Hotspot	NR Band n41	100	E	1	0167M	1:1	-0.13	2592.99	518598	CW/SRS	14.5	14.18	Top	10	0.027	1.076	0.029	0.029	0.018		29.8		
Hotspot	NR Band n41	100	E	1	0167M	1:1	-0.19	2592.99	518598	CW/SRS	14.5	14.18	Right	10	0.013	1.076	0.014	0.014	0.009		33.0		
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 12-56
NR Band n41 Antenna D Head SAR

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Path	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 n41	100	D	1	0167M	1:1	0.08	2592.99	518598	CW/SRS	13.5	13.27	Right Cheek	0	0.000	1.054	0.000	0.000	0.000		53.2	53.2	12.5
Head	NR Band n41	100	D	1	0167M	1:1	0.03	2592.99	518598	CW/SRS	13.5	13.27	Right Tilt	0	0.000	1.054	0.000	0.000	0.000		53.2		
Head	NR Band n41	100	D	1	0167M	1:1	0.09	2592.99	518598	CW/SRS	13.5	13.27	Left Cheek	0	0.000	1.054	0.000	0.000	0.000		53.2		
Head	NR Band n41	100	D	1	0167M	1:1	0.01	2592.99	518598	CW/SRS	13.5	13.27	Left Tilt	0	0.000	1.054	0.000	0.000	0.000		53.2		
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 12-57
NR Band n41 Antenna D Body-worn/Hotspot SAR

Exposure	Band / Mode	Bandwidth [MHz]	Ant.	Peak Number	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 n41	100	D	1	0167M	1:1	0.03	2592.99	518598	CW/SRS	14.0	13.76	Back	10	0.057	1.057	0.060	0.060	0.038		26.2	26.2	13.0
Hotspot	NR Band n41	100	D	1	0167M	1:1	0.07	2592.99	518598	CW/SRS	14.0	13.76	Front	10	0.012	1.057	0.013	0.013	0.008		32.9		
Hotspot	NR Band n41	100	D	1	0167M	1:1	0.08	2592.99	518598	CW/SRS	14.0	13.76	Bottom	10	0.039	1.057	0.041	0.041	0.026		27.8		
Hotspot	NR Band n41	100	D	1	0167M	1:1	0.01	2592.99	518598	CW/SRS	14.0	13.76	Right	10	0.002	1.057	0.002	0.002	0.001		40.7		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.16 NR Band n77 Standalone SAR

Table 12-58
NR Band 77 Antenna F Head SAR

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	100	QPSK	F	0152M	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.97	1	271	Right Cheek	0	0.867	1.268	1.099	1.099	0.687		16.5		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.01	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.56	1	1	Right Cheek	0	0.962	1.107	1.065	1.065	0.666		16.7		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.70	135	138	Right Cheek	0	0.726	1.349	0.979	0.979	0.612		17.0		
Head	NR Band n77	100	QPSK	F	0152M	1:1	-0.05	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.41	135	0	Right Cheek	0	0.832	1.146	0.953	0.953	0.596		17.2		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.30	270	0	Right Cheek	0	0.815	1.175	0.958	0.958	0.599		17.1		
Head	NR Band n77 DoD	100	QPSK	F	0152M	1:1	-0.02	3500.01	633334	DFT-s-OFDM	0.0	17.0	16.32	1	1	Right Tilt	0	0.776	1.169	0.907	0.907	0.567		17.4		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.02	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.97	1	271	Right Tilt	0	0.888	1.268	1.126	1.126	0.704		16.4		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.04	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.97	1	271	Right Tilt	0	0.893	1.268	1.025	1.025	0.641		16.8		
Head	NR Band n77	100	QPSK	F	0152M	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.56	1	1	Right Tilt	0	0.948	1.107	1.049	1.049	0.656		16.7		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.70	135	138	Right Tilt	0	0.818	1.349	1.103	1.103	0.689		16.5		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.02	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.41	135	0	Right Tilt	0	0.899	1.146	1.030	1.030	0.644		16.8		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.30	270	0	Right Tilt	0	0.821	1.175	0.965	0.965	0.603		17.1	16.3	16.0
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	CP-OFDM	0.0	17.0	16.37	1	1	Right Tilt	0	0.996	1.156	1.151	1.151	0.719		16.3		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.02	3930.00	662000	CP-OFDM	0.0	17.0	16.37	1	1	Right Tilt	0	1.010	1.156	1.168	1.168	0.730	A43	16.3		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.97	1	271	Left Cheek	0	0.441	1.268	0.559	0.559	0.349		19.5		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.01	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.56	1	1	Left Cheek	0	0.496	1.107	0.549	0.549	0.343		19.6		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.01	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.70	135	138	Left Cheek	0	0.403	1.349	0.544	0.544	0.340		19.6		
Head	NR Band n77	100	QPSK	F	0152M	1:1	-0.06	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.41	135	0	Left Cheek	0	0.467	1.146	0.558	0.558	0.349		19.5		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.03	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.97	1	271	Left Tilt	0	0.458	1.268	0.581	0.581	0.363		19.3		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.56	1	1	Left Tilt	0	0.498	1.107	0.551	0.551	0.344		19.5		
Head	NR Band n77	100	QPSK	F	0152M	1:1	-0.01	3750.00	650000	DFT-s-OFDM	0.0	17.0	15.70	135	138	Left Tilt	0	0.424	1.349	0.572	0.572	0.358		19.4		
Head	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	DFT-s-OFDM	0.0	17.0	16.41	135	0	Left Tilt	0	0.484	1.146	0.555	0.555	0.347		19.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population																Head 1.6 W/kg (mW/g) averaged over 1 gram										

Note: Blue entry represents variability measurement

Table 12-59
NR Band 77 Antenna F Body-worn/Hotspot SAR

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 DoD	100	QPSK	F	0152M	1:1	0.03	3500.01	633334	DFT-s-OFDM	0.0	18.0	17.34	1	1	Back	10	0.179	1.164	0.208	0.208	0.130		24.8		
Body-worn/Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.54	1	1	Back	10	0.219	1.112	0.244	0.244	0.153	A44	24.1		
Body-worn/Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.38	135	0	Back	10	0.206	1.153	0.238	0.238	0.149		24.2		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.03	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.54	1	1	Front	10	0.172	1.112	0.191	0.191	0.119		25.1		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.01	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.38	135	0	Front	10	0.162	1.153	0.187	0.187	0.117		25.2		
Hotspot	NR Band n77 DoD	100	QPSK	F	0152M	1:1	-0.06	3500.01	633334	DFT-s-OFDM	0.0	18.0	17.34	1	1	Top	10	0.248	1.164	0.289	0.289	0.181		23.3	23.2	17.0
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.10	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.54	1	1	Top	10	0.248	1.112	0.276	0.276	0.173		23.5		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	0.00	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.38	135	0	Top	10	0.229	1.153	0.264	0.264	0.165		23.7		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	0.05	3930.00	662000	CP-OFDM	0.0	18.0	17.37	1	1	Top	10	0.259	1.156	0.299	0.299	0.187	A45	23.2		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	0.01	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.54	1	1	Left	10	0.043	1.112	0.048	0.048	0.030		31.2		
Hotspot	NR Band n77	100	QPSK	F	0152M	1:1	-0.21	3930.00	662000	DFT-s-OFDM	0.0	18.0	17.38	135	0	Left	10	0.032	1.153	0.037	0.037	0.023		32.3		
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 12-60
NR Band 77 Antenna C Head SAR

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	C	0152M	1:1	0.01	3930.00	662000	CW/SRS	12.0	11.46	Right Cheek	0	0.000	1.132	0.000	0.000	0.000		51.4		
Head	NR Band n77	100	C	0152M	1:1	0.09	3930.00	662000	CW/SRS	12.0	11.46	Right Tilt	0	0.000	1.132	0.000	0.000	0.000		51.4		
Head	NR Band n77	100	C	0152M	1:1	0.06	3930.00	662000	CW/SRS	12.0	11.46	Left Cheek	0	0.000	1.132	0.000	0.000	0.000		51.4	30.9	11.0
Head	NR Band n77 DoD	100	C	0152M	1:1	0.07	3500.01	633334	CW/SRS	12.0	11.38	Left Tilt	0	0.011	1.153	0.013	0.013	0.008		30.9		
Head	NR Band n77	100	C	0152M	1:1	0.09	3930.00	662000	CW/SRS	12.0	11.46	Left Tilt	0	0.000	1.132	0.000	0.000	0.000		51.4		
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 12-61
NR Band 77 Antenna C Body-worn/Hotspot SAR

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	C	0152M	1:1	-0.17	3500.01	633334	CW/SRS	13.0	12.38	Back	10	0.081	1.153	0.093	0.093	0.058		23.2		
Body-worn/Hotspot	NR Band n77	100	C	0152M	1:1	0.01	3930.00	662000	CW/SRS	13.0	12.47	Back	10	0.015	1.130	0.017	0.017	0.011		30.7		
Hotspot	NR Band n77	100	C	0152M	1:1	-0.10	3930.00	662000	CW/SRS	13.0	12.47	Front	10	0.013	1.130	0.015	0.015	0.009		31.3		
Hotspot	NR Band n77	100	C	0152M	1:1	0.03	3930.00	662000	CW/SRS	13.0	12.47	Bottom	10	0.010	1.130	0.011	0.011	0.007		32.4		
Hotspot	NR Band n77 DoD	100	C	0152M	1:1	0.07	3500.01	633334	CW/SRS	13.0	12.38	Left	10	0.135	1.153	0.156	0.156	0.098		21.0		
Hotspot	NR Band n77	100	C	0152M	1:1	-0.02	3930.00	662000	CW/SRS	13.0	12.47	Left	10	0.031	1.130	0.035	0.035	0.022		27.5		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

Table 12-62
NR Band 77 Antenna I Head SAR

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	I	0152M	1:1	0.03	3930.00	662000	CW/SRS	15.5	14.72	Right Cheek	0	0.245	1.197	0.293	0.293	0.183		20.8		
Head	NR Band n77	100	I	0152M	1:1	-0.02	3930.00	662000	CW/SRS	15.5	14.72	Right Tilt	0	0.021	1.197	0.025	0.025	0.016		31.4		
Head	NR Band n77 DoD	100	I	0152M	1:1	-0.01	3500.01	633334	CW/SRS	15.5	14.92	Left Cheek	0	0.336	1.143	0.384	0.384	0.240		19.6	19.6	14.5
Head	NR Band n77	100	I	0152M	1:1	0.01	3930.00	662000	CW/SRS	15.5	14.72	Left Cheek	0	0.255	1.197	0.305	0.305	0.191		20.6		
Head	NR Band n77	100	I	0152M	1:1	0.08	3930.00	662000	CW/SRS	15.5	14.72	Left Tilt	0	0.019	1.197	0.023	0.023	0.014		31.9		
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 12-63
NR Band 77 Antenna I Body-worn/Hotspot SAR

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	I	0152M	1:1	-0.03	3500.01	633334	CW/SRS	16.5	15.91	Back	10	0.073	1.146	0.084	0.084	0.053		27.2		
Body-worn/Hotspot	NR Band n77	100	I	0152M	1:1	-0.18	3930.00	662000	CW/SRS	16.5	15.68	Back	10	0.027	1.208	0.033	0.033	0.021		31.3		
Hotspot	NR Band n77 DoD	100	I	0152M	1:1	-0.04	3500.01	633334	CW/SRS	16.5	15.91	Front	10	0.068	1.146	0.078	0.078	0.049		27.5		
Hotspot	NR Band n77	100	I	0152M	1:1	0.09	3930.00	662000	CW/SRS	16.5	15.68	Front	10	0.048	1.208	0.058	0.058	0.036		28.8		
Hotspot	NR Band n77	100	I	0152M	1:1	0.08	3930.00	662000	CW/SRS	16.5	15.68	Top	10	0.000	1.208	0.000	0.000	0.000		55.6		
Hotspot	NR Band n77	100	I	0152M	1:1	0.17	3930.00	662000	CW/SRS	16.5	15.68	Left	10	0.016	1.208	0.019	0.019	0.012		33.6		
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 12-64
NR Band 77 Antenna D Head SAR

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	D	0152M	1:1	0.06	3930.00	662000	CW/SRS	11.5	10.92	Right Cheek	0	0.000	1.143	0.000	0.000	0.000		50.9		
Head	NR Band n77 DoD	100	D	0152M	1:1	0.08	3500.01	633334	CW/SRS	11.5	11.29	Right Tilt	0	0.000	1.050	0.000	0.000	0.000		51.2		
Head	NR Band n77	100	D	0152M	1:1	0.09	3930.00	662000	CW/SRS	11.5	10.92	Right Tilt	0	0.000	1.143	0.000	0.000	0.000		50.9	50.9	10.5
Head	NR Band n77	100	D	0152M	1:1	0.05	3930.00	662000	CW/SRS	11.5	10.92	Left Cheek	0	0.000	1.143	0.000	0.000	0.000		50.9		
Head	NR Band n77	100	D	0152M	1:1	0.07	3930.00	662000	CW/SRS	11.5	10.92	Left Tilt	0	0.000	1.143	0.000	0.000	0.000		50.9		
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
NR Band 77 Antenna D Body-worn/Hotspot SAR

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	D	0152M	1:1	0.00	3500.01	633334	CW/SRS	12.5	12.31	Back	10	0.172	1.045	0.180	0.180	0.113		19.9		
Body-worn/Hotspot	NR Band n77	100	D	0152M	1:1	0.01	3930.00	662000	CW/SRS	12.5	11.93	Back	10	0.124	1.140	0.141	0.141	0.088		20.9		
Hotspot	NR Band n77	100	D	0152M	1:1	-0.15	3930.00	662000	CW/SRS	12.5	11.93	Front	10	0.008	1.140	0.009	0.009	0.006		32.8	19.9	11.5
Hotspot	NR Band n77	100	D	0152M	1:1	-0.09	3930.00	662000	CW/SRS	12.5	11.93	Bottom	10	0.016	1.140	0.018	0.018	0.011		29.8		
Hotspot	NR Band n77	100	D	0152M	1:1	0.08	3930.00	662000	CW/SRS	12.5	11.93	Right	10	0.004	1.140	0.005	0.005	0.003		35.9		
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram										

12.17 2.4 GHz WIFI SISO Standalone SAR

Table 12-66
2.4 GHz WIFI Antenna H Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Head	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	H	0156M	98.90	0.05	2437.00	6	1	14.0	12.87	Right Cheek	0	0.257	1.296	1.011	0.337	0.337	0.211		18.7	18.7	13.0	0.508
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 12-67
2.4 GHz WIFI Antenna H Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Refrence [W/kg]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	H	0156M	98.90	0.03	2437.00	6	1	20.0	19.12	Back	10	0.235	1.225	1.011	0.291	0.298	0.186	A47	25.3	23.6	20.1	0.314
Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	H	0156M	98.90	0.02	2437.00	6	1	20.0	19.12	Left	10	0.351	1.225	1.011	0.435	0.445	0.278		23.6			0.516
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 12-68
2.4 GHz WIFI Antenna J Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Head	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	J	0156M	98.99	0.04	2437.00	6	1	14.0	13.53	Left Cheek	0	0.334	1.114	1.010	0.376	0.376	0.235	A46	18.2	18.2	13.0	0.343
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 12-69
2.4 GHz WIFI Antenna J Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	J	0156M	98.99	0.00	2437.00	6	1	20.0	19.60	Back	10	0.109	1.096	1.010	0.121	0.391	0.244		29.1	26.3	25.1	0.127
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	J	0156M	98.99	-0.01	2437.00	6	1	20.0	19.60	Front	10	0.208	1.096	1.010	0.230	0.745	0.466		26.3			0.197
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 MIMO Standalone SAR

Table 12-70
2.4 GHz WIFI MIMO Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Head	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	MIMO	0156M	98.82	0.00	2437.00	6	1	14.0	12.93	14.0	13.46	Right Cheek	0	0.297	1.279	1.012	0.384	0.384	0.240		18.1	18.1	13.0	0.473
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 12-71
2.4 GHz WIFI MIMO Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Body-worn/Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	MIMO	0156M	98.82	-0.02	2437.00	6	1	20.0	18.98	20.0	19.54	Back	10	0.233	1.265	1.012	0.298	0.298	0.186		25.2	23.2	10.6	0.372
Hotspot	2.4 GHz WiFi / IEEE 802.11b	22	DSSS	MIMO	0156M	98.82	-0.01	2437.00	6	1	20.0	18.98	20.0	19.54	Left	10	0.367	1.265	1.012	0.470	0.470	0.294	A48	23.2			0.544
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 23 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 20 dBm.

12.19 5 GHz WIFI SISO Standalone SAR

Table 12-72
5 GHz WIFI Antenna H Head Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Refrence [W/kg]
Head	5 GHz WIFI/ IEEE 802.11n	40	OFDM	H	0156M	92.65	0.01	5270.00	54	U-NII-2A	13.5	14.0	13.28	Right Cheek	0	0.167	1.180	1.079	0.213	0.213	0.133		20.7	20.7	13.0	0.600
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
5 GHz WIFI Antenna H Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Refrence [W/kg]
Body-worn/Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	H	0156M	96.60	-0.11	5720.00	144	U-NII-2C	6	17.0	16.37	Back	10	0.374	1.156	1.035	0.447	0.447	0.279		20.4	20.4	16.0	0.527
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram												

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Refrence [W/kg]
Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	H	0156M	96.60	-0.16	5825.00	165	U-NII-3	6	17.0	16.14	Left	10	0.408	1.220	1.035	0.515	0.515	0.322		19.8	19.8	16.0	0.464
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
5 GHz WIFI Antenna H Phablet Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 10g SAR for Refrence [W/kg]
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	H	0156M	96.60	0.01	5865.00	173	U-NII-4	6	17.0	16.38	Left	0	1.880	1.154	1.035	2.245	2.461	0.615	A51	17.4	17.4	17.4	2.426
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

Table 12-75
5 GHz WIFI Antenna E Head Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Reference [W/kg]
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	E	0156M	96.62	0.01	5855.00	171	U-NII-4	29.3	14.0	13.03	Right Cheek	0	0.100	1.250	1.035	0.129	0.129	0.081		22.8	16.5	13.0	0.116
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 12-76
5 GHz WIFI Antenna E Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Reference [W/kg]
Body-worn	5 GHz WIFI/ IEEE 802.11a	20	OFDM	E	0156M	96.62	-0.15	5865.00	173	U-NII-4	6	17.0	16.70	Back	10	0.356	1.071	1.035	0.395	0.395	0.247		21.0	21.0	16.0	0.420
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Body 1.6 W/kg (mW/g) averaged over 1 gram												

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]	Test Position	Spacing [mm]	Measured 1g SAR [W/kg]	Power Scaling Factor	Duty Cycle 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]	Reported 1g SAR for Reference [W/kg]
Body-worn/Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	E	0156M	96.62	-0.16	5825.00	165	U-NII-3	6	17.0	16.76	Back	10	0.345	1.056	1.035	0.377	0.377	0.236		21.2	21.2	16.0	0.411
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 12-77
5 GHz WIFI Antenna E Phablet Spot-check Verification for Data Referencing

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]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 10g SAR for Reference [W/kg]
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	E	0156M	96.62	-0.05	5885.00	177	U-NII-4	6	17.0	16.91	Back	0	0.728	1.022	1.035	0.770	0.770	0.193		22.1	22.1	16.0	1.010
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

12.20 5 GHz WIFI MIMO Standalone SAR

Table 12-78
5 GHz WIFI MIMO Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Refrence [W/kg]
Head	5 GHz WIFI/ IEEE 802.11ac	80	OFDM	MIMO	0156M	96.68	-0.03	5690.00	138	U-NII-2C	58.5	14.0	12.76	14.0	13.82	Right Cheek	0	0.484	1.330	1.034	0.666	0.666	0.416	A49	15.7	15.7	13.0	0.555
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 12-79
5 GHz WIFI MIMO Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Refrence [W/kg]
Body-worn/Hotspot	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	0156M	96.68	-0.15	5825.00	165	U-NII-3	6	17.0	16.54	17.0	16.94	Back	10	0.564	1.112	1.034	0.648	0.648	0.405	A50	18.8	18.8	16.0	0.548
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 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.

Table 12-80
5 GHz WIFI MIMO Phablet Spot-check Verification for Data Referencing

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]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 10g SAR for Refrence [W/kg]
Phablet	5 GHz WIFI/ IEEE 802.11a	20	OFDM	MIMO	1534M	96.68	-0.06	5865.00	173	U-NII-4	6	17.0	16.01	17.0	16.81	Left	0	1.710	1.256	1.034	2.221	2.221	0.555		17.5	17.5	16.0	2.940
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 20 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 17 dBm.

12.21 6 GHz WIFI SISO Standalone SAR and APD

Table 12-81
6 GHz WIFI Antenna H Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Refrence [W/kg]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	0.01	6705.00	151	34	10.0	8.22	Right Cheek	0	0.071	1.507	1.007	0.108	0.108	0.068		19.6	19.6	9.0	0.143
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	0.01	6705.00	151	34	10.0	8.22	Right Cheek	0	0.387	1.507	1.007	0.587	0.587	0.029		0.778

Table 12-82
6 GHz WIFI Antenna H Body-worn Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	0.02	6305.00	71	34	11.5	10.16	Back	10	0.013	1.361	1.007	0.018	0.018	0.011		28.9	28.9	10.5	0.039
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	0.02	6305.00	71	34	11.5	10.16	Back	10	0.085	1.361	1.007	0.116	0.116	0.006		0.309

Table 12-83
6 GHz WIFI Antenna H Phablet Spot-check Verification for Data Referencing

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 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 10g SAR for Refrence [W/kg]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	-0.19	5985.00	7	34	11.5	10.30	Left	0	0.298	1.318	1.007	0.396	0.826	0.207		19.5	19.5	14.7	0.514
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	H	0128M	99.27	-0.19	5985.00	7	34	11.5	10.30	Left	0	7.110	1.318	1.007	9.437	19.718	0.986		12.285

Table 12-84
6 GHz WIFI Antenna E Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0128M	99.56	0.08	6465.00	103	34	10.0	9.42	Right Cheek	0	0.045	1.143	1.004	0.052	0.052	0.033		22.8	22.8	9.0	0.073
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Head 1.6 W/kg (mW/g) averaged over 1 gram												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0128M	99.56	0.08	6465.00	103	34	10.0	9.42	Right Cheek	0	0.290	1.143	1.004	0.333	0.333	0.017		0.550

Table 12-85
6 GHz WIFI Antenna E Body-worn Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0182M	99.56	0.04	6305.00	71	34	11.5	11.40	Back	10	0.126	1.023	1.004	0.129	0.982	0.614	A53	20.3	20.3	20.3	0.129
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Body 1.6 W/kg (mW/g) averaged over 1 gram												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0182M	99.56	0.04	6305.00	71	34	11.5	11.40	Back	10	0.915	1.023	1.004	0.940	7.131	0.357	A53	0.964

Table 12-86
6 GHz WIFI Antenna E Phablet Spot-check Verification for Data Referencing

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 10g SAR [W/kg]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported 10g SAR [W/kg]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0128M	99.56	-0.16	6305.00	71	34	11.5	11.40	Back	0	0.170	1.023	1.004	0.175	0.855	0.214		23.0	23.0	18.4	0.237
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

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 APD [W/m² (4cm²)]	Power Scaling Factor	Duty Cycle Scaling Factor	Reported APD [W/m² (4cm²)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	E	0128M	99.56	-0.16	6305.00	71	34	11.5	11.40	Back	0	3.910	1.023	1.004	4.016	19.675	0.984		5.485

12.22 6 GHz WIFI MIMO Standalone SAR and APD

Table 12-87
6 GHz WIFI MIMO Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio with Multi Tx Factor (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Refrence [W/kg]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	0.05	5985.00	7	68.1	10.0	8.30	10.0	9.70	Right Cheek	0	0.080	1.479	1.007	0.119	0.119	0.074		19.2	19.2	9.0	0.160
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Head 1.6 W/kg (mW/g) averaged over 1 gram												

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)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Head	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	0.05	5985.00	7	68.1	10.0	8.30	10.0	9.70	Right Cheek	0	0.473	1.479	1.007	0.704	0.704	0.035		0.749

Note: To achieve the 13 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 10 dBm.

Table 12-88
6 GHz WIFI MIMO Body-worn Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference [W/kg]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	0.07	6705.00	151	68.1	11.5	10.23	11.5	11.45	Back	10	0.079	1.339	1.007	0.107	0.107	0.067		21.2	21.2	10.5	0.116
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Body 1.6 W/kg (mW/g) averaged over 1 gram												

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)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Body-worn	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	0.07	6705.00	151	68.1	11.5	10.23	11.5	11.45	Back	10	0.588	1.339	1.007	0.793	0.793	0.040		0.892

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 12-89
6 GHz WIFI MIMO Phablet Spot-check Verification for Data Referencing

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]	Adjusted 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 10g SAR for Refrence [W/kg]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	-0.17	5985.00	7	68.1	11.5	9.90	11.5	11.01	Left	0	0.302	1.445	1.007	0.439	0.439	0.110	A54	19.2	19.2	10.5	0.534
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population															Phablet 4.0 W/kg (mW/g) averaged over 10 grams												

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)]	Adjusted APD [W/m² (4cm²)]	APD Exposure Ratio	Plot #	Reported APD for Reference [W/m² (4cm²)]
Phablet	6 GHz WIFI/ IEEE 802.11ax	80	OFDM	MIMO	0128M	99.27	-0.17	5985.00	7	68.1	11.5	9.90	11.5	11.01	Left	0	7.200	1.445	1.007	10.477	10.477	0.524	A54	12.661

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.

12.23 2.4 GHz Bluetooth SISO Standalone SAR

Table 12-90
2.4 GHz Bluetooth Antenna H Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Head	2.4 GHz Bluetooth LE	DSSS	H	0185M	85.28	-0.02	2402.00	0	1	12.5	12.49	Right Cheek	0	0.264	1.002	1.020	0.270	0.270	0.169		17.5	17.5	10.9	0.225
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 12-91
2.4 GHz Bluetooth Antenna H Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Body-worn/Hotspot	2.4 GHz Bluetooth LE	DSSS	H	0156M	85.28	0.01	2402.00	0	1	19.0	18.46	Back	10	0.239	1.132	1.020	0.276	0.418	0.261	A56	23.9	22.6	20.2	0.247
Hotspot	2.4 GHz Bluetooth LE	DSSS	H	0156M	85.28	0.02	2402.00	0	1	19.0	18.46	Left	10	0.324	1.132	1.020	0.374	0.566	0.354	A57	22.6			0.326
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 12-92
2.4 GHz Bluetooth Antenna J Head Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Head	2.4 GHz Bluetooth LE	DSSS	J	1532M	85.33	0.00	2402.00	0	1	12.5	11.73	Left Cheek	0	0.293	1.194	1.020	0.357	0.357	0.223		16.3	16.3	10.9	0.301
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 12-93
2.4 GHz Bluetooth Antenna J Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Body-worn/Hotspot	2.4 GHz Bluetooth LE	DSSS	J	0156M	85.33	0.02	2440.00	19	1	19.0	18.21	Back	10	0.042	1.199	1.020	0.051	0.364	0.228	A56	31.2	27.8	26.9	0.043
Hotspot	2.4 GHz Bluetooth LE	DSSS	J	0156M	85.33	-0.02	2440.00	19	1	19.0	18.21	Front	10	0.092	1.199	1.020	0.113	0.797	0.498	A57	27.8			0.101
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population												Body 1.6 W/kg (mW/g) averaged over 1 gram												

12.24 2.4 GHz Bluetooth MIMO Standalone SAR

Table 12-94
2.4 GHz Bluetooth MIMO Head Spot-check Verification for Data Referencing

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]	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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Head	2.4 GHz Bluetooth LE	DSSS	MIMO	1532M	85.33	-0.01	2402.00	0	1	12.5	12.60	12.5	12.06	Right Cheek	0	0.209	1.107	1.020	0.236	0.897	0.561		18.1	18.1	17.7	0.263
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 15.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12.5 dBm.

Table 12-95
2.4 GHz Bluetooth MIMO Body-worn/Hotspot Spot-check Verification for Data Referencing

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]	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]	Adjusted 1g SAR [W/kg]	Exposure Ratio (1g SAR)	Plot #	Plimit [dBm]	Overall Plimit [dBm]	EFS Plimit [dBm]	Reported 1g SAR for Reference model [W/kg]
Body-worn/Hotspot	2.4 GHz Bluetooth LE	DSSS	MIMO	0156M	85.33	0.04	2402.00	0	1	12.5	12.60	12.5	12.06	Back	10	0.043	1.107	1.020	0.049	0.267	0.167		25.0	23.2	19.3	0.052
Hotspot	2.4 GHz Bluetooth LE	DSSS	MIMO	0156M	85.33	0.06	2402.00	0	1	12.5	12.60	12.5	12.06	Left	10	0.065	1.107	1.020	0.073	0.403	0.252		23.2			0.079
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 15.5 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12.5 dBm.

12.25 UWB Standalone SAR

Table 12-96
UWB Antenna 1 Phablet SAR and APD

Exposure	Band / Mode	Service / Modulation	Ant.	Serial Number	Duty Cycle	Power Drift [dB]	Frequency [MHz]	Channel #	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #
Phablet	UWB	CW	1	0811M	1:1	0.08	6489.60	5	Back	0	0.001	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.04	7987.20	9	Back	0	0.000	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.02	6489.60	5	Front	0	0.001	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.01	7987.20	9	Front	0	0.002	0.001	
Phablet	UWB	CW	1	0811M	1:1	0.08	6489.60	5	Top	0	0.001	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.07	7987.20	9	Top	0	0.001	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.07	6489.60	5	Left	0	0.004	0.001	A58
Phablet	UWB	CW	1	0811M	1:1	0.04	7987.20	9	Left	0	0.002	0.001	
ANSI/IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4.0 W/kg (mW/g) averaged over 10 grams				
Exposure	**Band/ Mode**	**Service/ Modulation**	**Ant.**	**Serial Number**	**Duty Cycle**	**Power Drift [dB]**	**Frequency [MHz]**	**Channel #**	**Test Position**	**Spacing [mm]**	**Measured APD [W/m² (4cm²)]**	**APD Exposure Ratio**	**Plot #**
Phablet	UWB	CW	1	0811M	1:1	0.08	6489.60	5	Back	0	0.023	0.001	
Phablet	UWB	CW	1	0811M	1:1	0.04	7987.20	9	Back	0	0.003	0.000	
Phablet	UWB	CW	1	0811M	1:1	0.02	6489.60	5	Front	0	0.022	0.001	
Phablet	UWB	CW	1	0811M	1:1	0.01	7987.20	9	Front	0	0.052	0.003	
Phablet	UWB	CW	1	0811M	1:1	0.08	6489.60	5	Top	0	0.024	0.001	
Phablet	UWB	CW	1	0811M	1:1	0.07	7987.20	9	Top	0	0.029	0.001	
Phablet	UWB	CW	1	0811M	1:1	0.07	6489.60	5	Left	0	0.088	0.004	A58
Phablet	UWB	CW	1	0811M	1:1	0.04	7987.20	9	Left	0	0.044	0.002	

12.26 NFC Standalone SAR

Table 12-97
NFC Phablet SAR

Exposure	Band / Mode	Signal Type	Ant.	Serial Number	Power Drift [dB]	Frequency [MHz]	Test Position	Spacing [mm]	Measured 10g SAR [W/kg]	Exposure Ratio (10g SAR)	Plot #
Phablet	NFC	B	NFC	0173M	0.19	13.60	Back	0	0.020	0.005	A59
Phablet	NFC	B	NFC	0173M	0.09	13.60	Front	0	0.000	0.000	
Phablet	NFC	B	NFC	0173M	0.01	13.60	Top	0	0.000	0.000	
Phablet	NFC	B	NFC	0173M	0.09	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 10 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. This device supports dynamic antenna tuning for some bands. Per FCC Guidance, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 15 for supplemental data.
12. 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.
13. This device uses Qualcomm Smart Transmit for WWAN/WLAN/BT operations to control and manage transmitting power in real time to ensure RF Exposure compliance. Per FCC Guidance, compliance for was assessed at the minimum of the time averaged power and the maximum output power for each band/mode/exposure condition (DSI).
14. Per October 2020 TCB Workshop notes, absorbed power density (APD) using a 4cm2 averaging area is reported based on SAR measurements.

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.

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

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 and 87% transmission duty factor for Bluetooth LE to determine compliance. 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 were evaluated for BT BDR tethering applications.
3. The highest frame average power configurations for both Bluetooth and Bluetooth LE were evaluated for SAR. The worst case configuration was used for the remaining test positions as the most conservative scenario.

UWB Notes:

1. UWB was evaluated for phablet based on expected usage conditions.
2. Per FCC guidance, SAR was performed using 6.5 GHz/8GHz probe calibration factor for UWB.

13 POWER DENSITY DATA SUMMARY

13.1 6 GHz WIFI Power Density Results

Table 13-1

MEASUREMENT RESULTS																								
Frequency (MHz)	Channel	Mode	Service	Bandwidth [MHz]	Maximum Allowed Power (Ant H) [dBm]	Conducted Power (Ant H) [dBm]	Maximum Allowed Power (Ant E) [dBm]	Conducted Power (Ant E) [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	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 #
5985.00	7	802.11ax	OFDM	80	11.50	10.30	-	-	0.04	2	H	0182M	MCS0	Back	99.27	0.125	1.300	1.554	1.318	1.007	1.730	3.568	2.010	4.146	
5985.00	7	802.11ax	OFDM	80	11.50	10.30	-	-	0.17	2	H	0182M	MCS0	Front	99.27	0.125	0.634	1.554	1.318	1.007	0.609	1.256	0.678	1.398	
5985.00	7	802.11ax	OFDM	80	11.50	10.30	-	-	0.13	2	H	0182M	MCS0	Top	99.27	0.125	0.566	1.554	1.318	1.007	0.574	1.184	0.706	1.456	
5985.00	7	802.11ax	OFDM	80	11.50	10.30	-	-	0.04	2	H	0182M	MCS0	Left	99.27	0.125	1.110	1.554	1.318	1.007	2.030	4.187	2.280	4.703	
6305.00	71	802.11ax	OFDM	80	11.50	10.19	-	-	0.01	2	H	0182M	MCS0	Left	99.27	0.125	0.836	1.554	1.352	1.007	1.240	2.623	1.630	3.449	
6465.00	103	802.11ax	OFDM	80	11.00	9.33	-	-	0.17	2	H	0182M	MCS0	Left	99.27	0.125	0.722	1.554	1.469	1.007	0.623	1.432	0.902	2.074	
6705.00	151	802.11ax	OFDM	80	11.50	10.08	-	-	-0.11	2	H	0182M	MCS0	Left	99.27	0.125	1.040	1.554	1.387	1.007	1.000	2.170	1.460	3.169	
7025.00	215	802.11ax	OFDM	80	11.00	9.72	-	-	0.25	2	H	0182M	MCS0	Left	99.27	0.125	0.993	1.554	1.343	1.007	1.140	2.396	1.630	3.426	
5985.00	7	802.11ax	OFDM	80	11.50	10.30	-	-	0.57	10.02	H	0182M	MCS0	Left	99.27	0.125	1.130	1.554	1.318	1.007	0.895	1.846	0.991	2.044	
6705.00	151	802.11ax	OFDM	80	-	-	11.50	11.47	0.30	2	E	0182M	MCS0	Back	99.56	0.125	2.220	1.554	1.007	1.004	2.660	4.179	3.440	5.405	A60
6705.00	151	802.11ax	OFDM	80	-	-	11.50	11.47	-0.49	2	E	0182M	MCS0	Front	99.56	0.125	0.571	1.554	1.007	1.004	0.305	0.479	0.344	0.540	
6705.00	151	802.11ax	OFDM	80	-	-	11.50	11.47	-0.01	2	E	0182M	MCS0	Top	99.56	0.125	1.900	1.554	1.007	1.004	1.180	1.854	1.450	2.278	
6705.00	151	802.11ax	OFDM	80	-	-	11.50	11.47	-2.38	2	E	0182M	MCS0	Right	99.56	0.125	0.561	1.554	1.007	1.004	0.232	0.365	0.260	0.408	
5985.00	7	802.11ax	OFDM	80	-	-	11.50	10.74	0.04	2	E	0182M	MCS0	Back	99.56	0.125	1.040	1.554	1.191	1.004	1.250	2.323	1.700	3.159	
6305.00	71	802.11ax	OFDM	80	-	-	11.50	11.40	0.07	2	E	0182M	MCS0	Back	99.56	0.125	1.740	1.554	1.047	1.004	2.250	3.675	2.640	4.313	
6465.00	103	802.11ax	OFDM	80	-	-	11.00	10.77	-0.04	2	E	0182M	MCS0	Back	99.56	0.125	1.600	1.554	1.054	1.004	2.660	4.374	3.070	5.049	
7025.00	215	802.11ax	OFDM	80	-	-	11.00	10.95	-0.07	2	E	0128M	MCS0	Back	99.56	0.125	1.710	1.554	1.012	1.004	2.920	4.611	3.280	5.179	
6705.00	151	802.11ax	OFDM	80	11.50	10.23	11.50	11.45	-0.14	2	MIMO	1177M	MCS0	Back	99.27	0.125	-	1.554	1.340	1.007	2.320	4.865	2.630	5.515	
6705.00	151	802.11ax	OFDM	80	11.50	10.23	11.50	11.45	0.14	2	MIMO	1177M	MCS0	Front	99.27	0.125	-	1.554	1.340	1.007	0.730	1.531	0.891	1.868	
6705.00	151	802.11ax	OFDM	80	11.50	10.23	11.50	11.45	-0.07	2	MIMO	1177M	MCS0	Top	99.27	0.125	-	1.554	1.340	1.007	1.110	2.328	1.440	3.020	
6705.00	151	802.11ax	OFDM	80	11.50	10.23	11.50	11.45	-0.14	2	MIMO	1177M	MCS0	Right	99.27	0.125	-	1.554	1.340	1.007	0.338	0.709	0.382	0.801	
5985.00	7	802.11ax	OFDM	80	11.50	9.90	11.50	11.01	0.00	2	MIMO	0182M	MCS0	Left	99.27	0.125	-	1.554	1.445	1.007	1.970	4.455	2.260	5.110	
6305.00	71	802.11ax	OFDM	80	11.50	9.56	11.50	11.37	0.07	2	MIMO	0182M	MCS0	Left	99.27	0.125	2.120	1.554	1.563	1.007	2.000	4.892	2.360	5.772	
6465.00	103	802.11ax	OFDM	80	11.00	9.10	11.00	10.80	0.16	2	MIMO	0182M	MCS0	Left	99.27	0.125	3.400	1.554	1.549	1.007	2.350	5.696	2.960	7.175	
6705.00	151	802.11ax	OFDM	80	11.50	10.23	11.50	11.45	-0.01	2	MIMO	1177M	MCS0	Left	99.27	0.125	-	1.554	1.340	1.007	2.280	4.781	3.050	6.396	
7025.00	215	802.11ax	OFDM	80	11.00	9.50	11.00	10.99	-0.01	2	MIMO	0182M	MCS0	Left	99.27	0.125	2.360	1.554	1.413	1.007	1.430	3.162	1.650	3.648	
47 CFR §1.1310 - SAFETY LIMIT Spatial Average Uncontrolled Exposure / General Population																		Power Density 10 W/m² averaged over 4 cm²						

13.2 UWB Power Density Results

Table 13-2

MEASUREMENT RESULTS															
Frequency (MHz)	Channel	Mode	Power Drift (dB)	Spacing (mm)	Antenna Config.	DUT Serial Number	Side	Grid Step (λ)	iPD (W/m²)	Scaling Factor for Measurement Uncertainty per IEC 62479	Normal psPD (W/m²)	Scaled Normal psPD (W/m²)	Total psPD (W/m²)	Scaled Total psPD (W/m²)	Plot #
6489.60	5	CW	0.14	2	1	0811M	Back	0.125	-	1.554	0.199	0.309	0.203	0.315	
6489.60	5	CW	0.18	2	1	0811M	Front	0.125	-	1.554	0.286	0.444	0.292	0.454	
6489.60	5	CW	-0.14	2	1	0811M	Top	0.125	0.485	1.554	0.173	0.269	0.186	0.289	
6489.60	5	CW	-0.17	2	9.24	0811M	Top	0.125	0.251	1.554	0.068	0.106	0.071	0.110	
6489.60	5	CW	-0.14	2	1	0811M	Left	0.125	-	1.554	0.111	0.172	0.142	0.221	
7987.20	9	CW	0.14	2	1	0811M	Back	0.125	-	1.554	0.198	0.308	0.204	0.317	
7987.20	9	CW	-0.19	2	1	0811M	Front	0.125	-	1.554	0.455	0.707	0.463	0.720	A61
7987.20	9	CW	-0.19	2	1	0811M	Top	0.125	-	1.554	0.113	0.176	0.116	0.180	
7987.20	9	CW	-0.13	2	1	0811M	Left	0.125	-	1.554	0.063	0.098	0.081	0.126	
47 CFR §1.1310 - SAFETY LIMIT Spatial Average Uncontrolled Exposure / General Population						Power Density 10 W/m² averaged over 4 cm²									

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 D04.

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
Head SAR Measurement Variability Results

HEAD VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Test Position	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)	
3750	3750.00	650000	NR Band n77, 100 MHz Bandwidth	DFT-s-OFDM, 1RB, 271 RB Offset	Right Tilt	F	0.888	0.809	1.10	N/A	N/A	N/A	N/A
3900	3930.00	662000	NR Band n77, 100 MHz Bandwidth	CP-OFDM, 1RB, 1RB Offset	Right Tilt	F	1.010	0.996	1.01	N/A	N/A	N/A	N/A
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 14-2
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Test Position	Spacing	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)	
1750	1752.60	1513	UMTS 1750	RMC	Bottom	10mm	A	0.908	0.908	1.00	N/A	N/A	N/A	N/A
1900	1907.60	9538	UMTS 1900	RMC	Bottom	10mm	A	1.020	0.995	1.03	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 ADDITIONAL TESTING PER FCC GUIDANCE

15.1 LTE Band 41 Power Class 2 and Power Class 3 Linearity

This device supports Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operations is 43.3 % using UL-DL configuration 1. Per May 2017 TCB Workshop Notes based on the device behavior, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the highest power and available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR for each exposure condition. The linearity between the Power Class 2 and Power Class 3 SAR results and the respective frame averaged powers was calculated to determine that the results were linear.
Per May 2017 TCB Workshop, no additional SAR measurements were required since the linearity between power classes was < 10% and all reported SAR values were < 1.4 W/kg for 1g and < 3.5 W/kg for 10g.

Table 15-1
LTE Band 41 Antenna B Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	25.00	26.40
Measured Output Power (dBm)	23.88	24.81
Measured SAR (W/kg)	0.052	0.042
Measured Power (mW)	244.34	302.69
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	154.67	131.07
% deviation from expected linearity		-4.68%

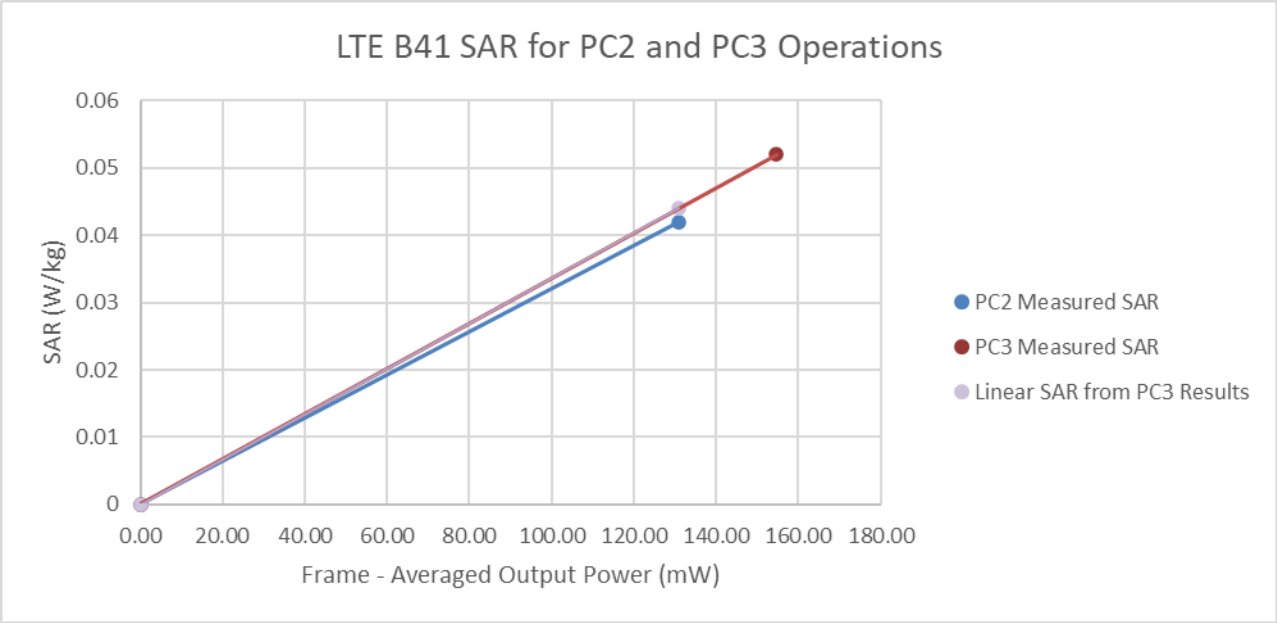


Figure 15-1
LTE Band 41 Antenna B Head Linearity

Table 15-2
LTE Band 41 Antenna F Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	17.50	19.10
Measured Output Power (dBm)	15.95	17.61
Measured SAR (W/kg)	0.486	0.497
Measured Power (mW)	39.36	57.68
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	24.91	24.97
% deviation from expected linearity		2.01%

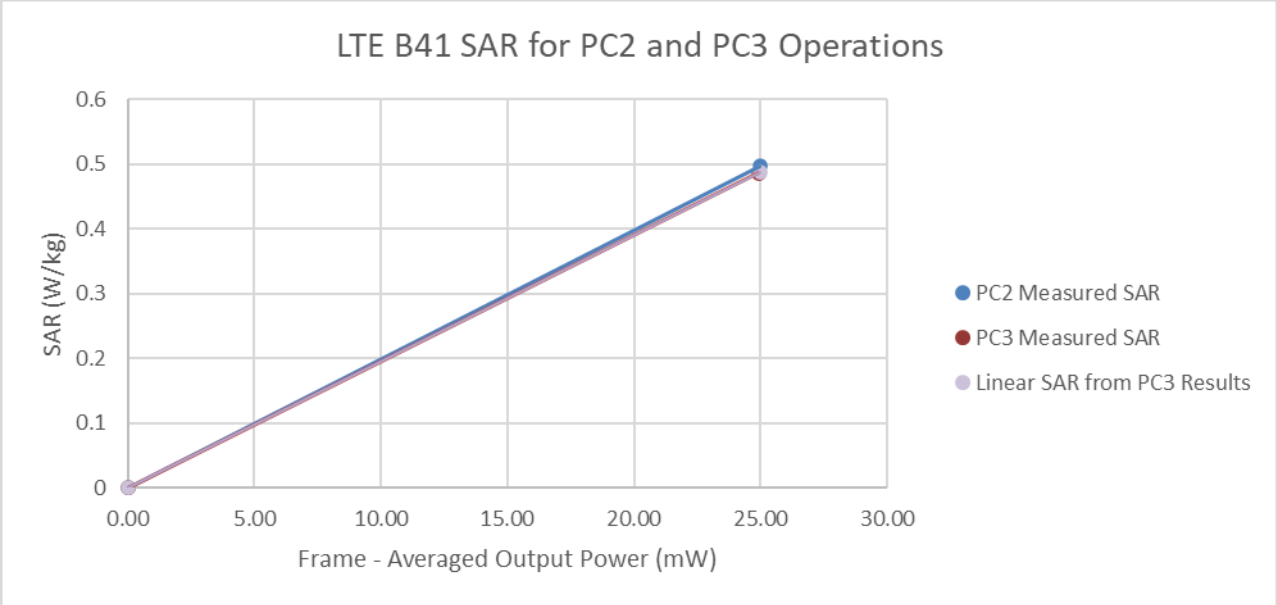


Figure 15-2
LTE Band 41 Antenna F Head Linearity

Table 15-3
LTE Band 41 Antenna B Body Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.50	24.10
Measured Output Power (dBm)	22.07	23.90
Measured SAR (W/kg)	0.258	0.286
Measured Power (mW)	161.06	245.47
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	101.95	106.29
% deviation from expected linearity		6.33%

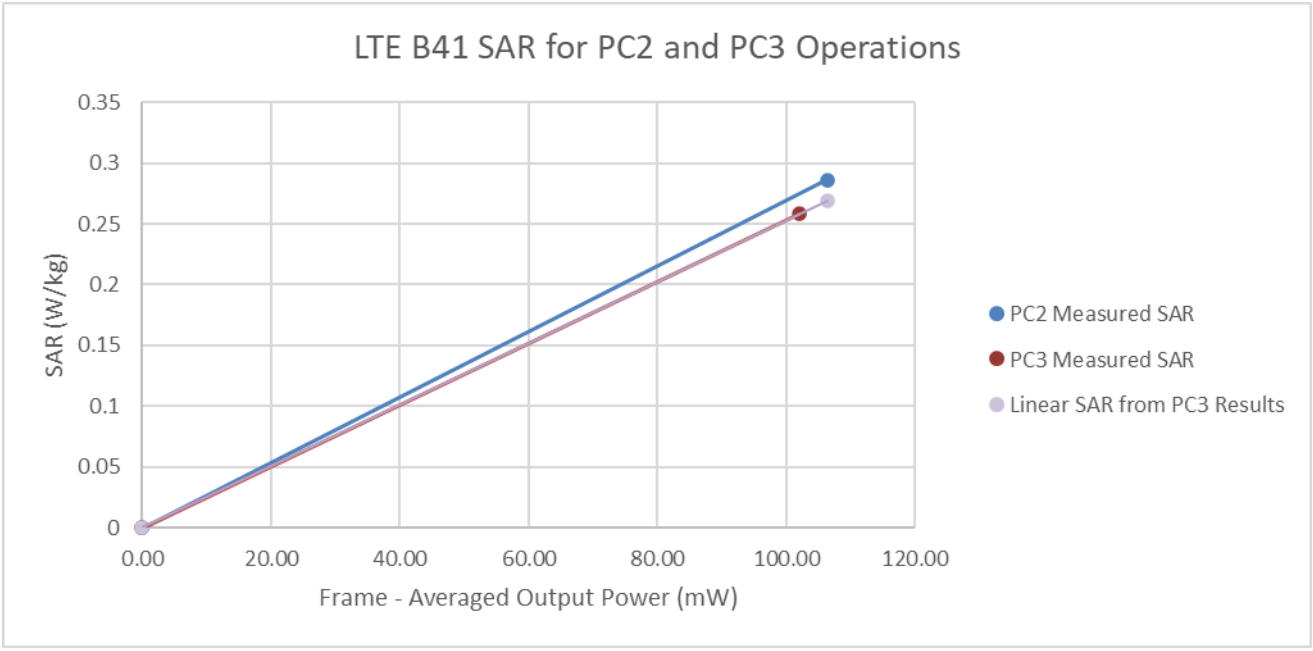
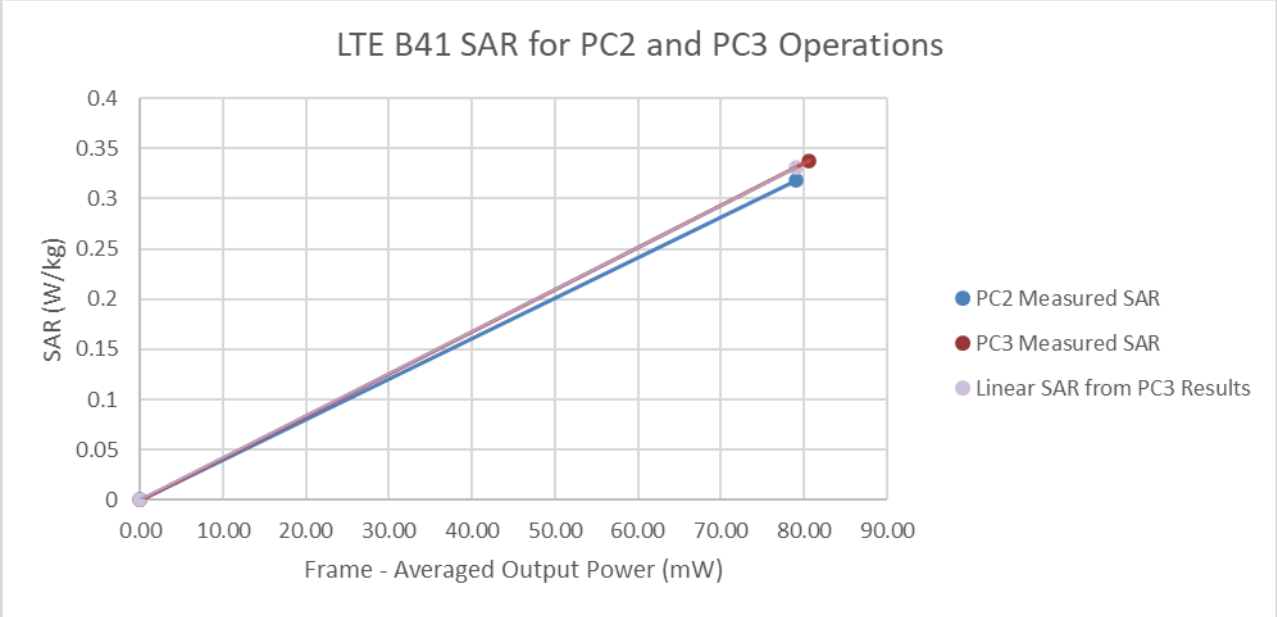


Figure 15-3
LTE Band 41 Antenna B Body Linearity

Table 15-4
LTE Band 41 Antenna F Body Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	22.00	23.60
Measured Output Power (dBm)	21.05	22.61
Measured SAR (W/kg)	0.338	0.318
Measured Power (mW)	127.35	182.39
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	80.61	78.97
% deviation from expected linearity		-3.97%



15.2 Tuner Testing

Per April 2019 TCB Workshop Notes, the following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence on the antenna characteristics, other than impedance matching.

To evaluate all the tuner states, the 96 tuner states were divided among the aggregate band, mode and exposure combinations. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest measured SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 96 states.

The operational description contains more information about the design and implementation of the dynamic antenna tuning.

Table 15-5
UMTS Supplemental Head SAR Data

Supplemental Head SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	846.60	Frequency (MHz)	1712.40	Frequency (MHz)	1880.00
Channel	4233	Channel	1312	Channel	9400
Measured 1g SAR (W/kg)	0.151	Measured 1g SAR (W/kg)	0.140	Measured 1g SAR (W/kg)	0.164
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.158	Auto-tune (State 34)	0.147	Auto-tune (State 17)	0.167
Default (State 3)	0.152	Default (State 11)	0.150	Default (State 17)	0.168
State 0	0.155	State 1	0.116	State 2	0.156
State 8	0.063	State 17	0.143	State 17	0.168
State 16	0.076	State 20	0.071	State 18	0.162
State 21	0.007	State 34	0.127	State 19	0.153
State 47	0.091	State 46	0.026	State 45	0.035
State 48	0.061	State 49	0.020	State 50	0.061
State 95	0.051	State 94	0.045	State 93	0.075

Table 15-6
LTE Supplemental Head SAR Data

Supplemental Head SAR Data				Supplemental Head SAR Data					
LTE B12		LTE B13		LTE B26		LTE B66		LTE B25	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1RB, 0 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	1720.00	Frequency (MHz)	1860.00
Channel	23095	Channel	23230	Channel	26865	Channel	132072	Channel	26140
Measured 1g SAR (W/kg)	0.119	Measured 1g SAR (W/kg)	0.150	Measured 1g SAR (W/kg)	0.145	Measured 1g SAR (W/kg)	0.150	Measured 1g SAR (W/kg)	0.129
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 1)	0.102	Auto-tune (State 0)	0.168	Auto-tune (State 3)	0.150	Auto-tune (State 55)	0.122	Auto-tune (State 0)	0.165
Default (State 1)	0.112	Default (State 11)	0.115	Default (State 1)	0.146	Default (State 55)	0.134	Default (State 0)	0.133
State 1	0.112	State 0	0.142	State 3	0.152	State 11	0.132	State 0	0.133
State 4	0.082	State 5	0.079	State 7	0.082	State 15	0.113	State 13	0.155
State 18	0.013	State 17	0.083	State 16	0.045	State 27	0.011	State 14	0.125
State 20	0.005	State 21	0.014	State 23	0.117	State 36	0.010	State 29	0.088
State 43	0.003	State 42	0.005	State 40	0.048	State 55	0.000	State 34	0.025
State 52	0.004	State 53	0.012	State 55	0.020	State 59	0.016	State 61	0.025
State 91	0.039	State 90	0.095	State 88	0.124	State 90	0.027	State 82	0.155

Table 15-7
NR Supplemental Head SAR Data

Supplemental Head SAR Data					
NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 1 RB Offset		DFTs-OFDM QPSK, 45 MHz Bandwidth, 1 RB, 1 RB Offset		DFTs-OFDM QPSK, 40 MHz Bandwidth, 108 RB, 54 RB Offset	
Test Position	Right Cheek	Test Position	Left Cheek	Test Position	Left Cheek
Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.131	Measured 1g SAR (W/kg)	0.154	Measured 1g SAR (W/kg)	0.170
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 3)	0.131	Auto-tune (State 55)	0.158	Auto-tune (State 0)	0.177
Default (State 1)	0.119	Default (State 55)	0.156	Default (State 0)	0.210
State 3	0.126	State 12	0.157	State 0	0.210
State 13	0.056	State 21	0.056	State 11	0.190
State 19	0.005	State 26	0.014	State 22	0.034
State 28	0.049	State 37	0.128	State 25	0.035
State 35	0.039	State 55	0.157	State 38	0.175
State 67	0.053	State 69	0.037	State 70	0.062
State 76	0.004	State 74	0.000	State 73	0.059

Table 15-8
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS B5		UMTS B4		UMTS B2	
RMC		RMC		RMC	
Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	846.60	Frequency (MHz)	1752.60	Frequency (MHz)	1907.60
Channel	4233	Channel	1513	Channel	9538
Measured 1g SAR (W/kg)	0.280	Measured 1g SAR (W/kg)	0.908	Measured 1g SAR (W/kg)	1.020
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.309	Auto-tune (State 34)	1.000	Auto-tune (State 7)	1.130
Default (State 3)	0.274	Default (State 56)	0.955	Default (State 17)	0.920
State 0	0.303	State 9	0.312	State 7	1.090
State 10	0.045	State 22	0.188	State 8	0.888
State 23	0.204	State 25	0.135	State 21	0.643
State 24	0.199	State 34	0.864	State 26	0.203
State 40	0.080	State 41	0.430	State 42	0.741
State 71	0.189	State 70	0.207	State 69	0.349
State 72	0.169	State 73	0.124	State 74	0.271

Table 15-9
LTE Supplemental Body SAR Data

Supplemental Body SAR Data				Supplemental Body SAR Data					
LTE B12		LTE B13		LTE B26		LTE B66		LTE B25	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 36 RB Offset		QPSK, 20 MHz Bandwidth, 50 RB, 0 RB Offset		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Back	Test Position	Back	Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	1720.00	Frequency (MHz)	1860.00
Channel	23095	Channel	23230	Channel	26865	Channel	132072	Channel	26140
Measured 1g SAR (W/kg)	0.307	Measured 1g SAR (W/kg)	0.329	Measured 1g SAR (W/kg)	0.260	Measured 1g SAR (W/kg)	0.523	Measured 1g SAR (W/kg)	0.571
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 0)	0.279	Auto-tune (State 0)	0.391	Auto-tune (State 3)	0.253	Auto-tune (State 34)	0.562	Auto-tune (State 16)	0.653
Default (State 1)	0.280	Default (State 11)	0.249	Default (State 1)	0.245	Default (State 55)	0.324	Default (State 0)	0.617
State 0	0.292	State 0	0.368	State 3	0.277	State 4	0.240	State 3	0.608
State 7	0.092	State 6	0.153	State 5	0.208	State 12	0.329	State 10	0.560
State 19	0.026	State 18	0.121	State 16	0.074	State 34	0.324	State 16	0.617
State 28	0.083	State 29	0.056	State 31	0.028	State 35	0.318	State 37	0.477
State 44	0.243	State 45	0.277	State 47	0.100	State 51	0.044	State 53	0.119
State 67	0.176	State 66	0.215	State 64	0.005	State 60	0.296	State 58	0.362
State 76	0.013	State 77	0.131	State 79	0.105	State 83	0.100	State 85	0.310

Table 15-10
NR Supplemental Body SAR Data

Supplemental Body SAR Data					
NR Band n5		NR Band n66		NR Band n25	
DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFTs-OFDM QPSK, 45 MHz Bandwidth, 240 RB, 0 RB Offset		DFTs-OFDM QPSK, 40 MHz Bandwidth, 1 RB, 214 RB Offset	
Test Position	Back	Test Position	Bottom	Test Position	Bottom
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	836.50	Frequency (MHz)	1745.00	Frequency (MHz)	1882.50
Channel	167300	Channel	349000	Channel	376500
Measured 1g SAR (W/kg)	0.222	Measured 1g SAR (W/kg)	0.687	Measured 1g SAR (W/kg)	0.694
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 4)	0.241	Auto-tune (State 55)	0.609	Auto-tune (State 9)	0.635
Default (State 1)	0.209	Default (State 55)	0.624	Default (State 0)	0.522
State 2	0.213	State 1	0.641	State 0	0.522
State 4	0.215	State 2	0.612	State 1	0.640
State 43	0.011	State 45	0.170	State 9	0.698
State 51	0.014	State 50	0.129	State 46	0.159
State 52	0.009	State 55	0.624	State 49	0.257
State 59	0.142	State 61	0.579	State 62	0.566
State 68	0.122	State 66	0.267	State 65	0.512

16 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	2023-11-14	Annual	2024-11-14	MY45093852
Agilent	E4438C	ESG Vector Signal Generator	2023-11-15	Annual	2024-11-15	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	2024-03-15	Annual	2025-03-15	MY47420651
Agilent	N5182A	MXG Vector Signal Generator	2024-03-07	Annual	2025-03-07	MY47420603
Agilent	8753ES	S-Parameter Vector Network Analyzer	2024-01-10	Annual	2025-01-10	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	2024-03-06	Annual	2025-03-06	MY40000670
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 Communications Test Set	2024-07-10	Annual	2025-07-10	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433973
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	15S1G6	Amplifier	2024-07-10	Annual	2025-07-10	390882
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2496A	Power Meter	2024-06-24	Annual	2025-06-24	1840005
Anritsu	ML2495A	Power Meter	2024-07-08	Annual	2025-07-08	1039008
Anritsu	MA2411B	Pulse Power Sensor	2024-07-01	Annual	2025-07-01	1911105
Anritsu	MA2411B	Pulse Power Sensor	2023-11-08	Annual	2024-11-08	1027293
Anritsu	MA24106A	USB Power Sensor	2024-07-09	Annual	2025-07-09	1244512
Anritsu	MA24106A	USB Power Sensor	2024-01-10	Annual	2025-01-10	1344557
Anritsu	MA24408A	Microwace Peak Power Sensor	2024-04-08	Annual	2025-04-08	11679
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	2023-12-15	Annual	2024-12-15	6200901190
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	2024-05-15	Annual	2025-05-15	6262150047
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	2024-05-30	Annual	2025-05-30	6262044715
Anritsu	MT8000A	Radio Communication Test Station	2024-04-10	Annual	2025-04-10	6261987983
Anritsu	MT8000A	Radio Communication Test Station	2024-05-02	Annual	2025-05-02	6272337436
Anritsu	MA24106A	USB Power Sensor	2023-12-04	Annual	2024-12-04	1520501
Anritsu	MA24106A	USB Power Sensor	2024-04-15	Annual	2025-04-15	1827528
Mini-Circuits	PWR-4GHS	USB Power Sensor	2024-06-12	Annual	2025-06-12	12001070013
Control Company	4052	Long Stem Thermometer	2024-02-27	Biennial	2026-02-27	240174346
Control Company	4052	Long Stem Thermometer	2024-02-27	Biennial	2026-02-27	240171096
Control Company	4052	Long Stem Thermometer	2024-02-27	Biennial	2026-02-27	240171059
Control Company	4352	Ultra Long Stem Thermometer	2024-01-15	Annual	2025-01-15	160508097
Control Company	4040	Therm./Clock/Humidity Monitor	2024-04-15	Biennial	2026-04-15	240310280
Control Company	4040	Therm./Clock/Humidity Monitor	2024-04-15	Biennial	2026-04-15	240310282
Control Company	S66279	Therm./Clock/Humidity Monitor	2024-02-16	Biennial	2026-02-16	240140051
Testo	608-H1	ALARM-HYGROMETER	2024-04-11	Annual	2025-04-11	83316971
Testo	608-H1	ALARM-HYGROMETER	2024-04-11	Annual	2025-04-11	83316952
Testo	608-H1	ALARM-HYGROMETER	2024-04-11	Annual	2025-04-11	83316953
Mitutoyo	500-196-30	CD-6"ASX 6Inch Digital Caliper	2022-02-16	Triennial	2025-02-16	A20238413
Keysight Technologies	N9020A	MXA Signal Analyzer	2024-07-08	Annual	2025-07-08	MY48010233
Keysight Technologies	N9020A	MXA Signal Analyzer	2024-04-11	Annual	2025-04-11	MY54500644
Agilent	N9020A	MXA Signal Analyzer	2024-06-14	Annual	2025-06-14	MY56470202
Agilent	N9020A	MXG Vector Signal Generator	2024-07-08	Annual	2025-07-08	MY48010233
MCL	BW-N10W5+	10dB Attenuator	2024-07-09	Annual	2025-07-09	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	CBT	N/A	CBT	31634
Mini-Circuits	BW-N20W5+	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-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	2024-07-10	Annual	2025-07-10	31634
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	2024-07-10	Annual	2025-07-10	UU13301538
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	2024-07-10	Annual	2025-07-10	UU19201507
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	2024-07-09	Annual	2025-07-09	2111
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
MCL	BW-N3W5+	3dB Attenuator	2024-07-09	Annual	2025-07-09	1608
Seekonk	TSF-100	Torque Wrench	2024-10-16	Annual	2025-10-16	47639-29
Seekonk	NC-100	Torque Wrench	2024-04-02	Biennial	2026-04-02	1262
Agilent	E5515C	Wireless Communications Test Set	2024-01-10	Annual	2025-01-10	MY50262130
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-01-11	Annual	2025-01-11	150117
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-01-10	Annual	2025-01-10	131454
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-04-24	Annual	2025-04-24	167284
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-07-08	Annual	2025-07-08	166818
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-01-10	Annual	2025-01-10	150117
Rohde & Schwarz	CMW500	Wideban Radio Communication Tester	2024-01-11	Annual	2025-01-11	171075

SPEAG	DAK-3.5	Dielectric Assessment Kit	2023-11-13	Annual	2024-11-13	1277
SPEAG	DAK-3.5	Dielectric Assessment Kit	2023-10-25	Annual	2024-10-25	1091
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	2024-07-08	Annual	2025-07-08	1039
SPEAG	MAIA	MAIA Modulation and Audio Interference	N/A	N/A	N/A	1237
SPEAG	MAIA	MAIA Modulation and Audio Interference	N/A	N/A	N/A	1331
SPEAG	MAIA	MAIA Modulation and Audio Interference	N/A	N/A	N/A	1390
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	2024-03-11	Annual	2025-03-11	1102
SPEAG	CLA-13	Confined Loop Antenna	2023-11-09	Annual	2024-11-09	1004
SPEAG	D750V3	750 MHz SAR Dipole	2023-09-13	Biennial	2025-09-13	1097
SPEAG	D835V2	835 MHz SAR Dipole	2024-01-18	Annual	2025-01-18	4d132
SPEAG	D835V2	835 MHz SAR Dipole	2022-11-18	Biennial	2024-11-18	4d108
SPEAG	D835V2	835 MHz SAR Dipole	2024-04-08	Annual	2025-04-08	4d119
SPEAG	D1750V2	1750 MHz SAR Dipole	2022-01-18	Triennial	2025-01-18	1148
SPEAG	D1750V2	1750 MHz SAR Dipole	2021-10-20	Triennial	2024-10-20	1150
SPEAG	D1750V2	1750 MHz SAR Dipole	2024-04-15	Annual	2025-04-15	1051
SPEAG	D1900V2	1900 MHz SAR Dipole	2022-08-08	Triennial	2025-08-08	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	2022-02-21	Triennial	2025-02-21	5d148
SPEAG	D1900V2	1900 MHz SAR Dipole	2024-07-10	Annual	2025-07-10	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	2024-04-12	Annual	2025-04-12	5d141
SPEAG	D2450V2	2450 MHz SAR Dipole	2024-02-08	Annual	2025-02-08	882
SPEAG	D2450V2	2450 MHz SAR Dipole	2024-05-10	Annual	2025-05-10	945
SPEAG	D2600V2	2600 MHz SAR Dipole	2024-06-14	Annual	2025-06-14	1009
SPEAG	D2600V2	3500 MHz SAR Dipole	2023-12-13	Annual	2023-12-13	1068
SPEAG	D3500V2	3500 MHz SAR Dipole	2024-06-10	Annual	2025-06-10	1127
SPEAG	D3700V2	3700 MHz SAR Dipole	2023-12-13	Annual	2024-12-13	1029
SPEAG	D3700V2	3700 MHz SAR Dipole	2024-06-10	Annual	2025-06-10	1096
SPEAG	D3900V2	3900 MHz SAR Dipole	2024-06-10	Annual	2025-06-10	1074
SPEAG	D5GHzV2	5 GHz SAR Dipole	2024-04-09	Annual	2025-04-09	1237
SPEAG	D6.5GHzV2	6.5 GHz SAR Dipole	2024-01-10	Annual	2025-01-10	1018
SPEAG	D6.5GHzV2	6.5 GHz SAR Dipole	2024-02-22	Annual	2025-02-22	1111
SPEAG	5G Verification Source 10GHz	10GHz System Verification Antenna	2024-10-08	Annual	2025-10-08	1006
SPEAG	5G Verification Source 10GHz	10GHz System Verification Antenna	2024-03-05	Annual	2025-03-05	1002
SPEAG	EX3DV4	SAR Probe	2024-09-11	Annual	2025-09-11	7558
SPEAG	EX3DV4	SAR Probe	2024-01-16	Annual	2025-01-16	7565
SPEAG	EX3DV4	SAR Probe	2024-09-02	Annual	2025-09-02	7491
SPEAG	EX3DV4	SAR Probe	2024-04-16	Annual	2025-04-16	7357
SPEAG	EX3DV4	SAR Probe	2024-02-09	Annual	2025-02-09	7427
SPEAG	EX3DV4	SAR Probe	2024-06-17	Annual	2025-06-17	7409
SPEAG	EX3DV4	SAR Probe	2024-02-09	Annual	2025-02-09	7640
SPEAG	EX3DV4	SAR Probe	2024-07-18	Annual	2025-07-18	7406
SPEAG	EX3DV4	SAR Probe	2024-06-28	Annual	2025-06-28	7803
SPEAG	EX3DV4	SAR Probe	2024-05-10	Annual	2025-05-10	3914
SPEAG	EX3DV4	SAR Probe	2024-04-17	Annual	2025-04-17	7718
SPEAG	EX3DV4	SAR Probe	2024-04-17	Annual	2025-04-17	7637
SPEAG	EX3DV5	SAR Probe	2024-05-10	Annual	2025-05-10	7402
SPEAG	EX3DV6	SAR Probe	2024-03-11	Annual	2025-03-11	7421
SPEAG	EX3DV4	SAR Probe	2024-03-08	Annual	2025-03-08	7527
SPEAG	EX3DV4	SAR Probe	2024-02-09	Annual	2025-02-09	7308
SPEAG	EUmmWV4	EUmmWV4 Probe	2024-02-02	Annual	2025-02-02	9622
SPEAG	EUmmWV4	EUmmWV4 Probe	2024-01-09	Annual	2025-01-09	9523
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-09-10	Annual	2025-09-10	1364
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-01-16	Annual	2025-01-16	1466
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-08-08	Annual	2025-08-08	1532
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-04-09	Annual	2025-04-09	1582
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-02-09	Annual	2025-02-09	467
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-06-11	Annual	2025-06-11	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-02-09	Annual	2025-02-09	1645
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-07-08	Annual	2025-07-08	1677
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-07-08	Annual	2025-07-08	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-05-08	Annual	2025-05-08	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-03-01	Annual	2025-03-01	665
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-04-09	Annual	2025-04-09	1652
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-05-08	Annual	2025-05-08	1502
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-03-06	Annual	2025-03-06	604
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-03-12	Annual	2025-03-12	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-03-06	Annual	2025-03-06	534
SPEAG	DAE4	Dasy Data Acquisition Electronics	2024-09-10	Annual	2025-09-10	1449
SPEAG	DAE4	Dasy Data Acquisition Electronics	2023-12-07	Annual	2024-12-07	1644

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.

17 MEASUREMENT UNCERTAINTIES

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	

18 CONCLUSION

18.1 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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