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SAR EVALUATION REPORT

Applicant Name:
Samsung Electronics Co., Ltd.
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Gyeonggi-do, 16677, Korea

Date of Testing:
05/08/22 - 07/11/22
Test Site/Location:
Element, Columbia, MD, USA
Document Serial No.:
1M2204110052-18.A3L (Rev1)

FCC ID: **A3LSMF936B**

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

DUT Type: Portable Handset
Application Type: Certification
FCC Rule Part(s): CFR §2.1093
Model(s): SM-F936B/DS
Additional Model(s): SM-F936B

Equipment Class	Band & Mode	Tx Frequency	SAR					
			1g Head (W/kg)	1g Body-Worn (W/kg)	1g Hotspot (W/kg)	10g Phablet (W/kg)	1g UMPC Body (W/kg)	10g UMPC Extremity
PCE	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	< 0.1	0.12	0.27	N/A	0.51	1.36
PCE	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	< 0.1	0.18	0.35	0.99	0.67	1.49
PCE	UMTS 850	826.40 - 846.60 MHz	0.14	0.17	0.34	N/A	0.51	1.32
PCE	UMTS 1750	1712.4 - 1752.6 MHz	0.11	0.92	0.70	1.89	0.58	2.30
PCE	UMTS 1900	1852.4 - 1907.6 MHz	0.10	0.46	0.46	1.88	0.77	2.40
PCE	LTE Band 12	699.7 - 715.3 MHz	0.19	0.25	0.40	N/A	0.41	1.47
PCE	LTE Band 17	706.5 - 713.5 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 13	779.5 - 784.5 MHz	0.18	0.18	0.28	N/A	0.31	0.71
PCE	LTE Band 26 (Cell)	814.7 - 848.3 MHz	0.16	0.14	0.29	N/A	0.63	1.36
PCE	LTE Band 5 (Cell)	824.7 - 848.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	0.77	0.57	0.71	2.60	0.50	2.14
PCE	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A	N/A	N/A	N/A	0.36	1.83
PCE	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	< 0.1	0.47	0.60	2.01	0.58	2.47
PCE	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	LTE Band 41	2498.5 - 2687.5 MHz	< 0.1	0.36	0.43	2.20	0.40	2.51
PCE	NR Band n12	701.5 - 713.5 MHz	0.18	0.23	0.34	N/A	0.42	1.20
PCE	NR Band n5 (Cell)	826.5 - 846.5 MHz	0.12	0.14	0.27	N/A	0.50	1.34
PCE	NR Band n66 (AWS)	1712.5 - 1777.5 MHz	0.80	0.58	0.59	2.18	0.50	2.30
PCE	NR Band n25 (PCS)	1852.5 - 1912.5 MHz	0.10	0.33	0.53	1.83	0.54	2.12
PCE	NR Band n2 (PCS)	1852.5 - 1907.5 MHz	N/A	N/A	N/A	N/A	N/A	N/A
PCE	NR Band n41	2506.02 - 2679.99 MHz	0.33	< 0.1	0.29	N/A	0.41	2.13
PCE	NR Band n77 DoD	3455.01 - 3544.98 MHz	0.66	0.17	0.46	1.05	0.57	2.43
PCE	NR Band n77	3705 - 3975 MHz	0.34	0.24	0.62	1.75	0.91	1.86
DTS	2.4 GHz WLAN	2412 - 2472 MHz	< 0.1	< 0.1	0.18	N/A	0.25	0.90
NII	U-NII-1	5180 - 5240 MHz	N/A	N/A	N/A	N/A	N/A	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.30*	< 0.1*	N/A	0.78*	0.23*	1.14*
NII	U-NII-2C	5500 - 5720 MHz	0.38*	< 0.1*	N/A	0.90*	0.25*	1.37*
NII	U-NII-3	5745 - 5825 MHz	0.32*	< 0.1*	0.21*	N/A	0.27*	1.57*
NII	U-NII-4	5845 - 5885 MHz	0.44*	< 0.1*	N/A	1.18*	0.27*	1.61*
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.30	< 0.1	0.26	N/A	0.33	1.17
DXX	NFC	13.56 MHz	N/A	N/A	N/A	< 0.1	N/A	< 0.1
Simultaneous SAR per KDB 690783 D01v01r03:			1.59	1.24	1.27	3.75	1.59	3.99

* Note: * SAR values represent RF exposure during MIMO operations.

Note: This revised Test Report (S/N: 1M2204110052-18.A3L (Rev1)) 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 1.9 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 DEVICE UNDER TEST

1.1 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 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz
NR Band n41	Voice/Data	2506.02 - 2679.99 MHz
NR Band n77 DoD	Voice/Data	3455.01 - 3544.98 MHz
NR Band n77	Voice/Data	3705 - 3975 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
U-NII-4	Voice/Data	5845 - 5885 MHz
U-NII-5	Voice/Data	5935 - 6415 MHz
U-NII-6	Voice/Data	6435 - 6525 MHz
U-NII-7	Voice/Data	6535 - 6875 MHz
U-NII-8	Voice/Data	6895 - 7115 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
UWB	Data	6489.6 - 7987.2 MHz

1.2 Time-Averaging Algorithm for RF Exposure Compliance

This Device is enabled with the Qualcomm® Smart Transmit Gen2 feature. 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 1.11 – Bibliography).

Note that WLAN operations are not enabled with Smart Transmit.

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 sub-6 radio), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN could be found in Section 1.11 - 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 sub-6 radio), for each characterized technology and band (see RF Exposure Part 0 Test Report, report SN can be found in Section 1.11 - Bibliography).

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 sub-6GHz WWAN is 1.0dB for this EUT.

Exposure Senario			Folder Open - Body	Folder Open - Extremity	Folder Closed - Body-Worn	Folder Closed - Phablet Max	Folder Open - Grip Sensor Active	Folder Open - Grip Sensor Active	Folder Closed - Grip Sensor Active	Folder Open - Head	Folder Closed - Head	Folder Open - Hotspot	Folder Closed - Hotspot	Folder Open Earjack	Folder Closed - Earjack	Maximum Tune-Up Output Power*
Averaging Volume			1g	10g	1g	10g	1g	10g	10g	1g	1g	1g	1g	10g	10g	
Spacing			10, 14, 12, 18 mm	0, 14, 12, 18 mm	15 mm	12, 14, 0 mm	10 mm	0 mm	0 mm	0 mm	0 mm	10 mm	10 mm	0 mm	0 mm	
Configuration			Folder Open	Folder Open	Folder Closed	Folder Closed	Folder Open	Folder Open	Folder Closed	Folder Open	Folder Closed	Folder Open	Folder Closed	Folder Open	Folder Closed	
DSI			0	0	1	1	2	2	3	4	5	6	7	8	9	
Technology/Band	Antenna	Antenna Group														Pmax
GSM 850	A, A+B	AG0	24.5		30.0		28.7		30.0	34.8	34.8	29.0	31.8	28.7	30.0	25.3
GSM 1900	B	AG0	24.8		27.1		16.8		16.8	34.4	34.4	16.8	16.8	16.8	16.8	22.1
UMTS 850	A, A+B	AG0	28.7		28.4		28.3		28.4	33.9	33.9	28.5	30.2	28.3	28.4	24.5
UMTS 1750	B	AG0	27.1		25.3		18.0		18.0	34.5	34.5	18.0	18.0	18.0	18.0	24.0
UMTS 1900	B	AG0	26.2		28.4		18.0		18.0	35.0	35.0	18.0	18.0	18.0	18.0	24.0
LTE Band 12/17	A, A+B	AG0	27.8		28.4		27.8		28.4	32.5	32.5	29.3	29.5	27.8	28.4	24.5
LTE Band 13	A, A+B	AG0	26.5		26.4		29.1		26.6	31.4	31.4	29.1	29.6	29.1	26.6	23.0
LTE Band 26/5 (Cell)	A, A+B	AG0	28.1		27.7		27.0		27.7	33.5	33.5	27.0	30.3	27.0	27.7	24.5
LTE Band 66/4 (AWS)	B	AG0	27.0		26.9		18.0		18.0	34.3	34.3	18.0	18.0	18.0	18.0	24.0
LTE Band 66 (AWS)	F	AG1	N/A		18.0		N/A		18.0	N/A	22.2	N/A	18.0	N/A	18.0	24.0
LTE Band 4 (AWS)	F	AG1	18.0		18.0		18.0		18.0	22.2	22.2	18.0	18.0	18.0	18.0	24.0
LTE Band 25/2 (PCS)	B	AG0	27.4		28.1		18.0		18.0	35.1	35.1	18.0	18.0	18.0	18.0	24.0
LTE Band 41 (PC3)	B	AG0	20.0		20.0		15.5		15.5	20.0	20.0	15.5	15.5	15.5	15.5	22.0
LTE Band 41 (PC2)	B	AG0	20.0		20.0		15.5		15.5	20.0	20.0	15.5	15.5	15.5	15.5	21.9
NR Band n12	A, A+B	AG0	26.7		27.3		28.2		27.3	32.6	32.6	28.6	29.6	28.2	27.3	24.0
NR Band n5 (Cell)	A, A+B	AG0	27.9		27.2		27.7		27.2	34.1	34.1	28.0	30.7	27.7	27.2	24.0
NR Band n66 (AWS)	B	AG0	27.4		26.8		18.0		18.0	34.7	34.7	18.0	18.0	18.0	18.0	23.5
NR Band n66 (AWS)	F	AG1	19.0		19.0		19.0		19.0	22.0	22.0	19.0	19.0	19.0	19.0	23.5
NR Band n25/n2 (PCS)	B	AG0	27.2		28.6		18.0		18.0	34.4	34.4	18.0	18.0	18.0	18.0	23.5
NR Band n41	F	AG1	18.0		18.0		18.0		18.0	18.0	18.0	18.0	18.0	18.0	18.0	24.0
NR Band n41	B	AG0	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	16.0
NR Band n41	E	AG1	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	19.0
NR Band n41	C	AG0	11.0		11.0		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	14.0
NR Band n77 DoD	F	AG1	17.5		17.5		17.5		17.5	17.5	17.5	17.5	17.5	17.5	17.5	24.0
NR Band n77 DoD	E	AG1	17.0		17.0		17.0		17.0	17.0	17.0	17.0	17.0	17.0	17.0	23.0
NR Band n77 DoD	G	AG1	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	20.0
NR Band n77 DoD	D	AG0	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	17.5
NR Band n77	F	AG1	17.5		17.5		17.5		17.5	17.5	17.5	17.5	17.5	17.5	17.5	24.0
NR Band n77	E	AG1	17.0		17.0		17.0		17.0	17.0	17.0	17.0	17.0	17.0	17.0	23.0
NR Band n77	G	AG1	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	20.0
NR Band n77	D	AG0	15.0		15.0		15.0		15.0	15.0	15.0	15.0	15.0	15.0	15.0	17.5

*Note all P_{limit} EFS and maximum tune up output power P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (e.g. GSM and LTE TDD).

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

The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G Sub6 WWAN technology, band, and DSI = minimum of "P_{limit} EFS" and "Maximum tune up output power P_{max}" + 1dB device uncertainty. SAR values in this report were scaled to this maximum time-averaged output power to determine compliance per KDB Publication 447498 D01v06.

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

Measurement Condition: All conducted power and SAR measurements in this report (Part 1 test) were performed by setting *Reserve_power_margin* (Smart Transmit EFS entry) to 0dB.

1.3 Power Reduction for SAR

This device uses an independent fixed level power reduction mechanism for WLAN/BT operations during voice or VoIP held to ear scenarios and when 5G NR is active, and for BT operations when 5/6 GHz WLAN is active. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

1.4 Nominal and Maximum Output Power Specifications

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

Note: Targets for 802.11ax RU operations can be found in Appendix K

1.4.1 2G/3G/4G/5G Output Power

GSM/GPRS/EDGE 850										
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	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 0 (Folder Open - Body or Folder Open - Extremity)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 2 (Folder Open - Grip Sensor Active)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 3 (Folder Closed - Grip Sensor Active)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 4 (Folder Open - Head)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 5 (Folder Closed - Head)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 6 (Folder Open - Hotspot)	Max Allowed Power	N/A	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	N/A	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 7 (Folder Closed - Hotspot)	Max Allowed Power	N/A	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	N/A	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 8 (Folder Open - Earjack)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
DSI = 9 (Folder Closed - Earjack)	Max Allowed Power	33.0	33.0	32.5	30.5	28.5	27.5	26.0	24.0	23.0
	Nominal	32.0	32.0	31.5	29.5	27.5	26.5	25.0	23.0	22.0
GSM/GPRS/EDGE 1900										
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	30.5	30.5	29.0	27.5	25.5	26.5	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	25.5	24.0	22.0	21.0
DSI = 0 (Folder Open - Body or Folder Open - Extremity)	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	26.5	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	25.5	24.0	22.0	21.0
DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	26.5	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	25.5	24.0	22.0	21.0
DSI = 2 (Folder Open - Grip Sensor Active)	Max Allowed Power	27.0	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	26.0	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0
DSI = 3 (Folder Closed - Grip Sensor Active)	Max Allowed Power	27.0	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	26.0	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0
DSI = 4 (Folder Open - Head)	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	26.5	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	25.5	24.0	22.0	21.0
DSI = 5 (Folder Closed - Head)	Max Allowed Power	30.5	30.5	29.0	27.5	25.5	26.5	25.0	23.0	22.0
	Nominal	29.5	29.5	28.0	26.5	24.5	25.5	24.0	22.0	21.0
DSI = 6 (Folder Open - Hotspot)	Max Allowed Power	N/A	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	N/A	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0
DSI = 7 (Folder Closed - Hotspot)	Max Allowed Power	N/A	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	N/A	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0
DSI = 8 (Folder Open - Earjack)	Max Allowed Power	27.0	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	26.0	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0
DSI = 9 (Folder Closed - Earjack)	Max Allowed Power	27.0	27.0	24.0	22.2	21.0	26.5	24.0	22.2	21.0
	Nominal	26.0	26.0	23.0	21.2	20.0	25.5	23.0	21.2	20.0

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

UMTS Band 5 (850 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 0 (Folder Open - Body or Folder Open - Extremity)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 2 (Folder Open - Grip Sensor Active)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 3 (Folder Closed - Grip Sensor Active)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 4 (Folder Open - Head)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 5 (Folder Closed - Head)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 6 (Folder Open - Hotspot)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 7 (Folder Closed - Hotspot)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 8 (Folder Open - Earjack)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
DSI = 9 (Folder Closed - Earjack)	Max Allowed Power	25.5	24.5	24.5	24.5
	Nominal	24.5	23.5	23.5	23.5
UMTS Band 4 (1750 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Folder Open - Body or Folder Open - Extremity)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 2 (Folder Open - Grip Sensor Active)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 3 (Folder Closed - Grip Sensor Active)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 4 (Folder Open - Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 5 (Folder Closed - Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 6 (Folder Open - Hotspot)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 7 (Folder Closed - Hotspot)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 8 (Folder Open - Earjack)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 9 (Folder Closed - Earjack)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
UMTS Band 2 (1900 MHz)					
Power Level		Modulated Average Output Power			
		3GPP WCDMA Rel 99	3GPP HSDPA Rel 5	3GPP HSUPA Rel 6	3GPP DC-HSDPA Rel 8
Pmax	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 0 (Folder Open - Body or Folder Open - Extremity)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 2 (Folder Open - Grip Sensor Active)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 3 (Folder Closed - Grip Sensor Active)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 4 (Folder Open - Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 5 (Folder Closed - Head)	Max Allowed Power	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
DSI = 6 (Folder Open - Hotspot)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 7 (Folder Closed - Hotspot)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 8 (Folder Open - Earjack)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0
DSI = 9 (Folder Closed - Earjack)	Max Allowed Power	19.0	18.0	18.0	18.0
	Nominal	18.0	17.0	17.0	17.0

Mode / Band	Antenna		Modulated Average Output Power (in dBm)										
			Pmax	DSI = 0 (Folder Open - Body or Folder Open - Extremity)	DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	DSI = 2 (Folder Open - Grip Sensor Active)	DSI = 3 (Folder Closed - Grip Sensor Active)	DSI = 4 (Folder Open - Head)	DSI = 5 (Folder Closed - Head)	DSI = 6 (Folder Open - Hotspot)	DSI = 7 (Folder Closed - Hotspot)	DSI = 8 (Folder Open - Earjack)	DSI = 9 (Folder Closed - Earjack)
LTE Band 12	A, A+B	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 17	A, A+B	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 13	A, A+B	Max Allowed Power	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
		Nominal	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
LTE Band 26 (Cell)	A, A+B	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 5 (Cell)	A, A+B	Max Allowed Power	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5	25.5
		Nominal	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
LTE Band 66 (AWS)	B	Max Allowed Power	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
		Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
LTE Band 66 (AWS)	F	Max Allowed Power	25.0	N/A	19.0	N/A	19.0	N/A	23.2	N/A	19.0	N/A	19.0
		Nominal	24.0	N/A	18.0	N/A	18.0	N/A	22.2	N/A	18.0	N/A	18.0
LTE Band 4 (AWS)	B	Max Allowed Power	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
		Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
LTE Band 4 (AWS)	F	Max Allowed Power	25.0	19.0	19.0	19.0	19.0	23.2	23.2	19.0	19.0	25.0	25.0
		Nominal	24.0	18.0	18.0	18.0	18.0	22.2	22.2	18.0	18.0	24.0	24.0
LTE Band 25 (PCS)	B	Max Allowed Power	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
		Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
LTE Band 2 (PCS)	B	Max Allowed Power	25.0	25.0	25.0	19.0	19.0	25.0	25.0	19.0	19.0	19.0	19.0
		Nominal	24.0	24.0	24.0	18.0	18.0	24.0	24.0	18.0	18.0	18.0	18.0
LTE Band 41 (PC3)	B	Max Allowed Power	25.0	23.0	23.0	18.5	18.5	23.0	23.0	18.5	18.5	18.5	18.5
		Nominal	24.0	22.0	22.0	17.5	17.5	22.0	22.0	17.5	17.5	17.5	17.5
LTE Band 41 (PC2)	B	Max Allowed Power	26.5	24.6	24.6	20.1	20.1	24.6	24.6	20.1	20.1	20.1	20.1
		Nominal	25.5	23.6	23.6	19.1	19.1	23.6	23.6	19.1	19.1	19.1	19.1

Mode / Band	Antenna		Modulated Average Output Power (in dBm)										
			Pmax	DSI = 0 (Folder Open - Body or Folder Open - Extremity)	DSI = 1 (Folder Closed - Body-Worn or Folder Closed - Phablet Max)	DSI = 2 (Folder Open - Grip Sensor Active)	DSI = 3 (Folder Closed - Grip Sensor Active)	DSI = 4 (Folder Open - Head)	DSI = 5 (Folder Closed - Head)	DSI = 6 (Folder Open - Hotspot)	DSI = 7 (Folder Closed - Hotspot)	DSI = 8 (Folder Open - Earjack)	DSI = 9 (Folder Closed - Earjack)
NR Band n12	A+B	Max Allowed Power	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
NR Band n12	A	Max Allowed Power	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
NR Band n5 (Cell)	A+B	Max Allowed Power	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
NR Band n5 (Cell)	A	Max Allowed Power	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
		Nominal	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
NR Band n66 (AWS)	B	Max Allowed Power	24.5	24.5	24.5	19.0	19.0	24.5	24.5	19.0	19.0	19.0	19.0
		Nominal	23.5	23.5	23.5	18.0	18.0	23.5	23.5	18.0	18.0	18.0	18.0
NR Band n66 (AWS)	F	Max Allowed Power	24.5	20.0	20.0	20.0	20.0	23.0	23.0	20.0	20.0	20.0	20.0
		Nominal	23.5	19.0	19.0	19.0	19.0	22.0	22.0	19.0	19.0	19.0	19.0
NR Band n25 (PCS)	B	Max Allowed Power	24.5	24.5	24.5	19.0	19.0	24.5	24.5	19.0	19.0	19.0	19.0
		Nominal	23.5	23.5	23.5	18.0	18.0	23.5	23.5	18.0	18.0	18.0	18.0
NR Band n2 (PCS)	B	Max Allowed Power	24.5	24.5	24.5	19.0	19.0	24.5	24.5	19.0	19.0	19.0	19.0
		Nominal	23.5	23.5	23.5	18.0	18.0	23.5	23.5	18.0	18.0	18.0	18.0
NR Band n41	F	Max Allowed Power	25.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
		Nominal	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
NR Band n41	B	Max Allowed Power	17.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	16.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR Band n41	E	Max Allowed Power	20.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	19.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR Band n41	C	Max Allowed Power	15.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
		Nominal	14.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
NR Band n77 DoD	F	Max Allowed Power	25.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
		Nominal	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
NR Band n77 DoD	E	Max Allowed Power	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
		Nominal	23.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
NR Band n77 DoD	G	Max Allowed Power	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	20.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR Band n77 DoD	D	Max Allowed Power	18.5	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	17.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR Band n77	F	Max Allowed Power	25.0	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
		Nominal	24.0	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
NR Band n77	E	Max Allowed Power	24.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
		Nominal	23.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
NR Band n77	G	Max Allowed Power	21.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	20.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
NR Band n77	D	Max Allowed Power	18.5	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
		Nominal	17.5	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

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

1.4.1 2.4 GHz Maximum SISO/MIMO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 2								MIMO							
		b		g		n		ax		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	18.0 Ch. 12: 5.0 Ch. 13: -1.0	19.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 5.0 Ch. 13: -1.0	18.0 Ch. 12: 6.0 Ch. 13: 0.0	21.0 Ch. 12: 8.0 Ch. 13: 2.0	22.0 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 12: 9.0 Ch. 13: 3.0	20.0 Ch. 12: 8.0 Ch. 13: 2.0	21.0 Ch. 12: 9.0 Ch. 13: 3.0

1.4.2 2.4 GHz Reduced WLAN Output Powers

The below table is applicable in the following conditions:

- Simultaneous conditions with 5/6 GHz WLAN (RCV not Active)
- Simultaneous conditions with 5G FR1 NR (RCV not Active)
- Simultaneous conditions with 5G FR1 NR and 5/6 GHz WLAN (RCV not Active)

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 2								MIMO							
		b		g		n		ax		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	14.0 Ch. 12: 5.0 Ch. 13: -1.0	15.0 Ch. 12: 6.0 Ch. 13: 0.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0	17.0 Ch. 12: 8.0 Ch. 13: 2.0	18.0 Ch. 12: 9.0 Ch. 13: 3.0

The below table is applicable in the following conditions:

- RCV Active
- RCV Active during simultaneous conditions with 5/6 GHz WLAN
- RCV Active during simultaneous conditions with 5G FR1 NR
- RCV Active during simultaneous conditions with 5G FR1 NR and 5/6 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)															
		SISO Antenna 2								MIMO							
		b		g		n		ax		b (CDD + STBC)		g (CDD + STBC)		n (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
2.4 GHz WIFI	2.45 GHz	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	12.0 Ch. 12: 5.0 Ch. 13: -1.0	13.0 Ch. 12: 6.0 Ch. 13: 0.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0	15.0 Ch. 12: 8.0 Ch. 13: 2.0	16.0 Ch. 12: 9.0 Ch. 13: 3.0

1.4.3 5 GHz Maximum SISO/MIMO WLAN Output Power

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-2A	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-2C	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-3	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
	UNII-4	20.0	21.0	20.0	21.0	20.0	21.0	20.0	21.0
5 GHz WIFI (40MHz BW)	UNII-1			19.0 Ch. 38: 17.5	20.0 Ch. 38: 18.5	19.0 Ch. 38: 17.5	20.0 Ch. 38: 18.5	19.0 Ch. 38: 17.5	20.0 Ch. 38: 18.5
	UNII-2A			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-2C			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-3			19.0	20.0	19.0	20.0	19.0	20.0
	UNII-4			19.0	20.0	19.0	20.0	19.0	20.0
5 GHz WIFI (80MHz BW)	UNII-1					17.0	18.0	17.0	18.0
	UNII-2A					18.0	19.0	18.0	19.0
	UNII-2C					18.0	19.0	18.0	19.0
	UNII-3					18.0	19.0	18.0	19.0
	UNII-4					18.0	19.0	18.0	19.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					18.0	19.0	18.0	19.0
	UNII-2C					18.0	19.0	18.0	19.0
	UNII-3/4					18.0	19.0	18.0	19.0

1.4.4 5 GHz Reduced WLAN Output Powers

The below table is applicable in the following conditions:

- Simultaneous conditions with 2.4 GHz WLAN
- Simultaneous conditions with 5G FR1 NR
- Simultaneous conditions with 5G FR1 NR and 2.4 GHz WLAN

Mode	Band	IEEE 802.11 (in dBm)							
		MIMO							
		a (CDD + STBC)		n (CDD + STBC, SDM)		ac (CDD + STBC, SDM)		ax (SU) (CDD + STBC, SDM)	
		Nominal	Maximum	Nominal	Maximum	Nominal	Maximum	Nominal	Maximum
5 GHz WIFI (20MHz BW)	UNII-1	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	UNII-2A	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	UNII-2C	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	UNII-3	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
	UNII-4	17.0	18.0	17.0	18.0	17.0	18.0	17.0	18.0
5 GHz WIFI (40MHz BW)	UNII-1			17.0	18.0	17.0	18.0	17.0	18.0
	UNII-2A			17.0	18.0	17.0	18.0	17.0	18.0
	UNII-2C			17.0	18.0	17.0	18.0	17.0	18.0
	UNII-3			17.0	18.0	17.0	18.0	17.0	18.0
	UNII-4			17.0	18.0	17.0	18.0	17.0	18.0
5 GHz WIFI (80MHz BW)	UNII-1					17.0	18.0	17.0	18.0
	UNII-2A					17.0	18.0	17.0	18.0
	UNII-2C					17.0	18.0	17.0	18.0
	UNII-3					17.0	18.0	17.0	18.0
	UNII-4					17.0	18.0	17.0	18.0
5 GHz WIFI (160MHz BW)	UNII-1/2A					17.0	18.0	17.0	18.0
	UNII-2C					17.0	18.0	17.0	18.0
	UNII-3/4					17.0	18.0	17.0	18.0

The below table is applicable in the following conditions:

- RCV Active
- RCV Active during simultaneous conditions with 2.4 GHz WLAN
- RCV Active during simultaneous conditions with 5G FR1 NR
- RCV Active during simultaneous conditions with 5G FR1 NR and 2.4 GHz WLAN

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

1.4.5 2.4 GHz Maximum Bluetooth Output Power

Mode	Antenna 1		Antenna 2	
	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	18.5	19.5	15.0	16.0
Bluetooth EDR (in dBm)	15.5	16.5	12.0	13.0
Bluetooth LE 1Mbps, 2Mbps (in dBm)	18.5	19.5	15.0	16.0
Bluetooth LE 125/500 kbps (in dBm)	10.0	11.0	N/A	N/A

1.4.6 2.4 GHz Reduced Bluetooth Output Power

The below table is applicable in the following conditions:

- Simultaneous conditions with 5/6 GHz WLAN
- Simultaneous conditions with 5G FR1 NR

Mode	Antenna 1		Antenna 2	
	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	14.0	15.0	12.0	13.0
Bluetooth EDR (in dBm)	14.0	15.0	12.0	13.0
Bluetooth LE 1Mbps, 2Mbps (in dBm)	14.0	15.0	12.0	13.0
Bluetooth LE 125/500 kbps (in dBm)	10.0	11.0	N/A	N/A

The below table is applicable in the following conditions:

- RCV active

Mode	Antenna 1		Antenna 2	
	Nominal	Maximum	Nominal	Maximum
Bluetooth (in dBm)	10.5	11.5	8.5	9.5
Bluetooth EDR (in dBm)	10.5	11.5	8.5	9.5
Bluetooth LE 1Mbps, 2Mbps (in dBm)	10.5	11.5	8.5	9.5
Bluetooth LE 125/500 kbps (in dBm)	10.0	11.0	N/A	N/A

1.5 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 Appendix F. This device is considered a "phablet" when it is in closed configuration and a "UMPC mini-tablet" when it is in open configuration. Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filing.

Table 1-1
Device Edges/Sides for Closed Configuration SAR Testing

Device Sides/Edges for SAR Testing							
Mode	Antenna	Back	Front	Top	Bottom	Right	Left
GPRS 850	A+B	Yes	Yes	No	Yes	Yes	Yes
GPRS 850	A	Yes	Yes	No	Yes	Yes	No
GPRS 1900	B	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	A+B	Yes	Yes	No	Yes	Yes	Yes
UMTS 850	A	Yes	Yes	No	Yes	Yes	No
UMTS 1750	B	Yes	Yes	No	Yes	Yes	Yes
UMTS 1900	B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 12	A	Yes	Yes	No	Yes	Yes	No
LTE Band 13	A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 13	A	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	A+B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 26 (Cell)	A	Yes	Yes	No	Yes	Yes	No
LTE Band 66 (AWS)	B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 25 (PCS)	B	Yes	Yes	No	Yes	Yes	Yes
LTE Band 41	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	A+B	Yes	Yes	No	Yes	Yes	Yes
NR Band n12	A	Yes	Yes	No	Yes	Yes	No
NR Band n5 (Cell)	A+B	Yes	Yes	No	Yes	Yes	Yes
NR Band n5 (Cell)	A	Yes	Yes	No	Yes	Yes	No
NR Band n66 (AWS)	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n66 (AWS)	F	Yes	Yes	Yes	No	No	Yes
NR Band n25 (PCS)	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n41	F	Yes	Yes	Yes	No	No	Yes
NR Band n41	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n41	E	Yes	Yes	Yes	No	Yes	No
NR Band n41	C	Yes	Yes	No	Yes	No	Yes
NR Band n77 DoD	F	Yes	Yes	Yes	No	No	Yes
NR Band n77 DoD	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n77 DoD	E	Yes	Yes	Yes	No	Yes	No
NR Band n77 DoD	C	Yes	Yes	No	Yes	No	Yes
NR Band n77	F	Yes	Yes	Yes	No	No	Yes
NR Band n77	B	Yes	Yes	No	Yes	Yes	Yes
NR Band n77	E	Yes	Yes	Yes	No	Yes	No
NR Band n77	C	Yes	Yes	No	Yes	No	Yes
2.4 GHz WLAN	Ant 2	Yes	Yes	No	Yes	No	Yes
2.4 GHz WLAN	MIMO	Yes	Yes	Yes	Yes	No	Yes
5 GHz WLAN	MIMO	Yes	Yes	Yes	Yes	No	Yes
Bluetooth	Ant 1	Yes	Yes	Yes	No	No	Yes
Bluetooth	Ant 2	Yes	Yes	No	Yes	No	Yes
NFC	NFC	Yes	Yes	No	No	Yes	Yes

Table 1-2
Device Edges/Sides for Open Configuration SAR Testing

Device Sides/Edges for SAR Testing							
Mode	Antenna	Back	Front	Top	Bottom	Right	Left
GPRS 850	A+B	Yes	Yes	No	Yes	Yes	No
GPRS 1900	B	Yes	Yes	No	Yes	Yes	No
UMTS 850	A+B	Yes	Yes	No	Yes	Yes	No
UMTS 1750	B	Yes	Yes	No	Yes	Yes	No
UMTS 1900	B	Yes	Yes	No	Yes	Yes	No
LTE Band 12	A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 13	A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 26 (Cell)	A+B	Yes	Yes	No	Yes	Yes	No
LTE Band 66 (AWS)	B	Yes	Yes	No	Yes	Yes	No
LTE Band 4 (AWS)	F	Yes	Yes	Yes	No	No	No
LTE Band 25 (PCS)	B	Yes	Yes	No	Yes	Yes	No
LTE Band 41	B	Yes	Yes	No	Yes	Yes	No
NR Band n5 (Cell)	A+B	Yes	Yes	No	Yes	Yes	No
NR Band n12	A+B	Yes	Yes	No	Yes	Yes	No
NR Band n66 (AWS)	B	Yes	Yes	No	Yes	Yes	No
NR Band n66 (AWS)	F	Yes	Yes	Yes	No	No	No
NR Band n25 (PCS)	B	Yes	Yes	No	Yes	Yes	No
NR Band n41	F	Yes	Yes	Yes	No	No	No
NR Band n41	B	Yes	Yes	No	Yes	Yes	No
NR Band n41	E	Yes	Yes	Yes	No	Yes	No
NR Band n41	C	Yes	Yes	No	Yes	No	No
NR Band n77 DoD	F	Yes	Yes	Yes	No	No	No
NR Band n77 DoD	E	Yes	Yes	Yes	No	Yes	No
NR Band n77 DoD	G	Yes	Yes	Yes	No	Yes	No
NR Band n77 DoD	D	Yes	Yes	No	Yes	No	No
NR Band n77	F	Yes	Yes	Yes	No	No	No
NR Band n77	E	Yes	Yes	Yes	No	Yes	No
NR Band n77	G	Yes	Yes	Yes	No	Yes	No
NR Band n77	D	Yes	Yes	No	Yes	No	No
2.4 GHz WLAN	Ant 2	Yes	Yes	No	Yes	No	No
2.4 GHz WLAN	MIMO	Yes	Yes	Yes	Yes	No	No
5 GHz WLAN	MIMO	Yes	Yes	Yes	Yes	No	No
Bluetooth	Ant 1	Yes	Yes	Yes	No	No	No
Bluetooth	Ant 2	Yes	Yes	No	Yes	No	No
NFC	NFC	Yes	Yes	No	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for wireless router SAR, phablet SAR or UMPC mini-tablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 Section III, FCC KDB Publication 941225 D07v01r02 and FCC KDB Publication 648474 D04v01r03. 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, UNII-4, and WIFI6E operations are disabled.

1.6 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 Appendix F.

1.7 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 4.3.2 procedures.

Table 1-3
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Head	Body-Worn Accessory	Wireless Router	Phablet	UMPC Body	UMPC Extremity	Notes
1	GSM voice + 2.4 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
2	GSM voice + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
3	GSM voice + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
4	GSM voice + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
5	GSM voice + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
6	GSM voice + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
7	GSM voice + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
8	GSM voice + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
9	GSM voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
10	GSM voice + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
11	GSM voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
12	GSM voice + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
13	GSM voice + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
14	GSM voice + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
15	UMTS + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
16	UMTS + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
17	UMTS + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
18	UMTS + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
19	UMTS + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
20	UMTS + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
21	UMTS + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
22	UMTS + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
23	UMTS + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
24	UMTS + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
25	UMTS + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
26	UMTS + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
27	UMTS + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
28	UMTS + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
29	LTE + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
30	LTE + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
31	LTE + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
32	LTE + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
33	LTE + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
34	LTE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
35	LTE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
36	LTE + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
37	LTE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
38	LTE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
39	LTE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
40	LTE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
41	LTE + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
42	LTE + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
43	LTE + NR	Yes	Yes	N/A	Yes	Yes	Yes	
44	LTE + NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
45	LTE + NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
46	LTE + NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
47	LTE + NR + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
48	LTE + NR + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
49	LTE + NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
50	LTE + NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
51	LTE + NR + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
52	LTE + NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
53	LTE + NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
54	LTE + NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
55	LTE + NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
56	LTE + NR + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
57	LTE + NR + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
58	NR + 2.4 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
59	NR + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
60	NR + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
61	NR + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
62	NR + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
63	NR + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	Yes	Yes	Yes	Yes	Yes	Yes	
64	NR + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	Yes	Yes	N/A	Yes	Yes	Yes	
65	NR + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
66	NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
67	NR + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
68	NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
69	NR + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
70	NR + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
71	NR + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	Yes^	Yes	N/A	Yes	Yes	Yes	^ Bluetooth Tethering is considered
72	GPRS/EDGE + 2.4 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
73	GPRS/EDGE + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
74	GPRS/EDGE + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	Yes	
75	GPRS/EDGE + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
76	GPRS/EDGE + 2.4 GHz Bluetooth Ant 2	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
77	GPRS/EDGE + 2.4 GHz WLAN MIMO + 5 GHz WLAN MIMO	N/A	N/A	Yes	Yes	Yes	Yes	
78	GPRS/EDGE + 2.4 GHz WLAN MIMO + 6 GHz WLAN MIMO	N/A	N/A	N/A	Yes	Yes	Yes	
79	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
80	GPRS/EDGE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
81	GPRS/EDGE + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
82	GPRS/EDGE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	N/A	Yes	Yes	Yes	
83	GPRS/EDGE + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 2	N/A	N/A	N/A	Yes	Yes	Yes	
84	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 5 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	Yes^	Yes	Yes	Yes	^ Bluetooth Tethering is considered
85	GPRS/EDGE + 2.4 GHz WLAN Ant 2 + 6 GHz WLAN MIMO + 2.4 GHz Bluetooth Ant 1	N/A	N/A	N/A	Yes	Yes	Yes	

1. 2.4 GHz WLAN ant 1 and 2.4 GHz Bluetooth ant 1 share the same antenna path and cannot transmit simultaneously.
2. 5 GHz WLAN and 6 GHz WLAN share the same antenna path and cannot transmit simultaneously.
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. 802.11a/b/g/n/ac/ax supports CDD and STBC and 802.11n/ac/ax additionally supports SDM.
8. This device supports VoWIFI.
9. This device supports Bluetooth Tethering in SISO Mode.
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 and UMPC extremity based on expected usage conditions.

1.8 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.

This device supports channel 1-13 for 2.4 GHZ WLAN. However, because channel 12/13 targets are not higher than that of channels 1-11, default channels for SAR testing are determined per FCC KDB 248227 D01v02r02.

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

This device supports IEEE 802.11ax with the following features:

a) Up to 160 MHz Bandwidth only for 5/6 GHz
b) Up to 20 MHz Bandwidth only for 2.4 GHz
c) 2 Tx antenna output
d) Up to 1024 QAM is supported
e) TDWR and Band gap channels are supported for 5/6 GHz
f) MU-MIMO UL Operations are not supported

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in a closed configuration since the diagonal dimension is greater than 160mm and less than 200mm. Phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg. Because wireless router operations are not supported for U-NII-1, U-NII-2A, U-NII-2C, and U-NII-4 WLAN, 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, SAR testing was not required for 802.11ax when applying the initial test configuration procedures of KDB 248227, with 802.11ax considered a higher order 802.11 mode.

This device supports 6 GHz WIFI Operations. RF Exposure assessment for these bands can be found in the WIFI 6E RF Exposure Report (report SN can be found in Section 1.11 – Bibliography). Simultaneous transmission analysis is addressed in Appendix D of this report.

(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 Appendix J.

Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in a closed configuration since the diagonal dimension is greater than 160mm and less than 200mm. Therefore, phablet SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR > 1.2 W/kg.

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

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

This device supports both Power Class 2 (PC2) and Power Class 3 (PC3) for LTE Band 41. Per May 2017 TCB Workshop Notes, SAR tests were performed with Power Class 3 (given the specific UL/DL limitations for Power Class 2). Additionally, SAR testing for the power class 2 condition was evaluated for the highest configuration in Power Class 3 for each test configuration to confirm the results were scalable linearly (See Section 13).

For closed test conditions only, this device can transmit with antenna F for LTE B4/66. SAR tests for antenna F were additionally performed for these LTE bands to ensure compliance.

For NR band n77, this device can transmit with antenna E or with antenna F during certain use conditions. SAR test for these NR bands were fully evaluated with antenna E and F for all exposure conditions.

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.

For 2G/3G/4G/5G bands operating < 1 GHz, this device can transmit with Ant A or with Ant A+ Ant B. The RF path for both conditions is identical, therefore separate conducted powers are not required for these conditions. For closed test conditions, both Ant A and Ant A + Ant B conditions were fully evaluated for all exposure conditions. For open UMPC Body or UMPC Extremity conditions, only Ant A + Ant B conditions are supported as described in the operational description.

1.9 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 D04v01r03 (Phablet Procedures)
- FCC KDB Publication 616217 D04v01r02 (Tablet, Proximity Sensor)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO, LTE Band 41 Power Class 2/3)
- November 2017, April 2018, October 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (IEEE 802.11ax, Dynamic Antenna Tuning)
- FCC KDB Publication 941225 D07v01r02 (UMPC Mini-Tablet Devices)

1.10 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 11.

1.11 Bibliography

Report Type	Report Serial Number
RF Exposure Part 2 Test Report	1M2204110052-29.A3L
RF Exposure Compliance Summary Report	1M2204110052-31.A3L
RF Exposure Part 0 Test Report	1M2204110052-30.A3L
6-8 GHz RF Exposure Evaluation	1M2204110052-28.A3L

2 LTE AND NR INFORMATION

LTE Information					
Form Factor	Portable Handset				
	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 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 2 (PCS) (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				
Channel Bandwidths	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 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 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)	848.3 (27033)	
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)	847.5 (27025)	
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)	846.5 (27015)	
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)	844 (26990)	
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)	841.5 (26965)	
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)	848.3 (20643)	
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)	847.5 (20635)	
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)	846.5 (20625)	
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)	844 (20600)	
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)	1779.3 (132665)	
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)	1778.5 (132657)	
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)	1777.5 (132647)	
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)	1775 (132622)	
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)	1772.5 (132597)	
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)	1770 (132572)	
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)	1754.3 (20393)	
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)	1753.5 (20385)	
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)	1752.5 (20375)	
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)	1750 (20350)	
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)	1747.5 (20325)	
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)	1745 (20300)	
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)	1914.3 (26683)	
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)	1913.5 (26675)	
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)	1912.5 (26665)	
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)	1910 (26640)	
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)	1907.5 (26615)	
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)	1905 (26590)	
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)	1909.3 (19193)	
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)	1908.5 (19185)	
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)	1907.5 (19175)	
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)	1905 (19150)	
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)	1902.5 (19125)	
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)	1900 (19100)	
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2549.5 (40185)	2593 (40620)	2636.5 (41055)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2549.5 (40185)	2593 (40620)	2636.5 (41055)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2549.5 (40185)	2593 (40620)	2636.5 (41055)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2549.5 (40185)	2593 (40620)	2636.5 (41055)
UE Category	DL UE Cat 20, UL UE Cat 18				
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 and downlink MIMO features as shown in 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: WIFI Offloading, Relay, HetNet, Enhanced MIMO, eICIC, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

NR Information						
Form Factor	Portable Handset					
Frequency Range of each NR transmission band	NR Band n12 (701.5 - 713.5 MHz)					
	NR Band n5 (Cell) (826.5 - 846.5 MHz)					
	NR Band n66 (AWS) (1712.5 - 1777.5 MHz)					
	NR Band n25 (PCS) (1852.5 - 1912.5 MHz)					
	NR Band n2 (PCS) (1852.5 - 1907.5 MHz)					
	NR Band n41 (2506.02 - 2679.99 MHz)					
	NR Band n77 DoD (3455.01 - 3544.98 MHz)					
	NR Band n77 (3705 - 3975 MHz)					
Channel Bandwidths	NR Band n12: 5 MHz, 10 MHz, 15 MHz					
	NR Band n5 (Cell): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n66 (AWS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n25 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n2 (PCS): 5 MHz, 10 MHz, 15 MHz, 20 MHz					
	NR Band n41: 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 80 MHz, 90 MHz, 100 MHz					
	NR Band n77 DoD: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz					
	NR Band n77: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90 MHz, 100 MHz					
Channel Numbers and Frequencies (MHz)						
NR Band n12: 5 MHz	701.5 (140300)		707.5 (141500)		713.5 (142700)	
NR Band n12: 10 MHz	704 (140800)		707.5 (141500)		711 (142200)	
NR Band n12: 15 MHz	706.5 (141300)		707.5 (141500)		708.5 (141700)	
NR Band n5 (Cell): 5 MHz	826.5 (165300)		836.5 (167300)		846.5 (169300)	
NR Band n5 (Cell): 10 MHz	829 (165800)		836.5 (167300)		844 (168800)	
NR Band n5 (Cell): 15 MHz	831.5 (166300)		836.5 (167300)		841.5 (168300)	
NR Band n5 (Cell): 20 MHz	834 (166800)		836.5 (167300)		839 (167800)	
NR Band n66 (AWS): 5 MHz	1712.5 (342500)		1745 (349000)		1777.5 (355500)	
NR Band n66 (AWS): 10 MHz	1715 (343000)		1745 (349000)		1775 (355000)	
NR Band n66 (AWS): 15 MHz	1717.5 (343500)		1745 (349000)		1772.5 (354500)	
NR Band n66 (AWS): 20 MHz	1720 (344000)		1745 (349000)		1770 (354000)	
NR Band n25 (PCS): 5 MHz	1852.5 (370500)		1882.5 (376500)		1912.5 (382500)	
NR Band n25 (PCS): 10 MHz	1855 (371000)		1882.5 (376500)		1910 (382000)	
NR Band n25 (PCS): 15 MHz	1857.5 (371500)		1882.5 (376500)		1907.5 (381500)	
NR Band n25 (PCS): 20 MHz	1860 (372000)		1882.5 (376500)		1905 (381000)	
NR Band n2 (PCS): 5 MHz	1852.5 (370500)		1880 (376000)		1907.5 (381500)	
NR Band n2 (PCS): 10 MHz	1855 (371000)		1880 (376000)		1905 (381000)	
NR Band n2 (PCS): 15 MHz	1857.5 (371500)		1880 (376000)		1902.5 (380500)	
NR Band n2 (PCS): 20 MHz	1860 (372000)		1880 (376000)		1900 (380000)	
NR Band n41: 20 MHz	2506.02 (501204)	2549.49 (509898)	2592.99 (518598)		2636.49 (527298)	2679.99 (535998)
NR Band n41: 30 MHz	2511 (502200)	2552.01 (510402)	2592.99 (518598)		2634 (526800)	2674.98 (534996)
NR Band n41: 40 MHz	2516.01 (503202)	2567.34 (513468)	N/A		2618.67 (523734)	2670 (534000)
NR Band n41: 50 MHz	2521.02 (504204)		2592.99 (518598)		2664.99 (532998)	
NR Band n41: 60 MHz	2526 (505200)		2592.99 (518598)		2659.98 (531996)	
NR Band n41: 80 MHz	2536.02 (507204)		N/A		2649.99 (529998)	
NR Band n41: 90 MHz	2541 (508200)		N/A		2644.98 (528996)	
NR Band n41: 100 MHz	2546.01 (509202)		2592.99 (518598)		2640 (528000)	
NR Band n77 DoD: 10 MHz	3455.01 (630334)		3500.01 (633334)		3544.98 (636332)	
NR Band n77 DoD: 15 MHz	3457.5 (630500)		3500.01 (633334)		3542.49 (636166)	
NR Band n77 DoD: 20 MHz	3460.02 (630668)		3500.01 (633334)		3540 (636000)	
NR Band n77 DoD: 30 MHz	3465 (631000)		3500.01 (633334)		3534.99 (635666)	
NR Band n77 DoD: 40 MHz	3470.01 (631334)		N/A		3470.01 (631334)	
NR Band n77 DoD: 50 MHz	3475.02 (631668)		N/A		3475.02 (631668)	
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)	3867 (657800)	3921 (661400)	3975 (665000)
NR Band n77: 15 MHz	3707.52 (647168)	3760.5 (650700)	3813.51 (654234)	3866.49 (657766)	3919.5 (661300)	3972.48 (664832)
NR Band n77: 20 MHz	3710.01 (647334)	3762 (650800)	3813.99 (654266)	3866.01 (657734)	3918 (661200)	3969.99 (664666)
NR Band n77: 30 MHz	3715.02 (647668)	3765 (651000)	3815.01 (654334)	3864.99 (657666)	3915 (661000)	3964.98 (664332)
NR Band n77: 40 MHz	3720 (648000)	3768 (651200)	3816 (654400)	3864 (657600)	3912 (660800)	3960 (664000)
NR Band n77: 50 MHz	3725.01 (648334)	3782.49 (652166)	3840 (656000)		3897.51 (659834)	3954.99 (663666)
NR Band n77: 60 MHz	3730.02 (648668)	3803.34 (653556)	N/A	N/A	3876.66 (658444)	3949.98 (663332)
NR Band n77: 70 MHz	3735 (649000)	3804.99 (653666)	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	N/A	3930 (662000)
SCS for NR Band n12/n5/n66/n25/n2	15 kHz					
SCS for NR Band n41/n77	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 Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations					
LTE Anchor Bands for NR Band n12	N/A					
LTE Anchor Bands for NR Band n5 (Cell)	LTE B2/66					
LTE Anchor Bands for NR Band n66 (AWS)	LTE B2/5/12/13					
LTE Anchor Bands for NR Band n25 (PCS)	LTE B12/13					
LTE Anchor Bands for NR Band n2 (PCS)	LTE B5/12/13					
LTE Anchor Bands for NR Band n41	LTE B4/12/66					
LTE Anchor Bands for NR Band n77	LTE B2/5/12/13/25/66					

3 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.

3.1 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 3-1).

Equation 3-1
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]

4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

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

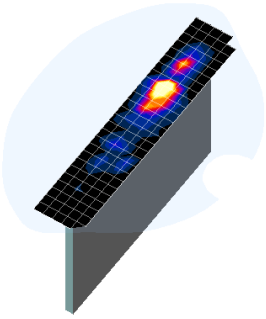

Figure 4-1
Sample SAR Area Scan

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 4-1) 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 4-1) 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 4-1. 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 4-1
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

5 DEFINITION OF REFERENCE POINTS

5.1 EAR REFERENCE POINT

Figure 5-2 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 5-1. 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 5-1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

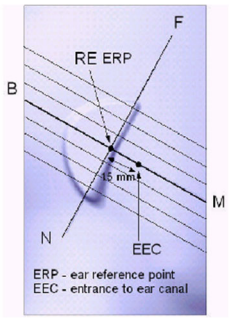

Figure 5-1
Close-Up Side view of ERP

5.2 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 5-3). 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 5-2
Front, back and side view of SAM Twin Phantom

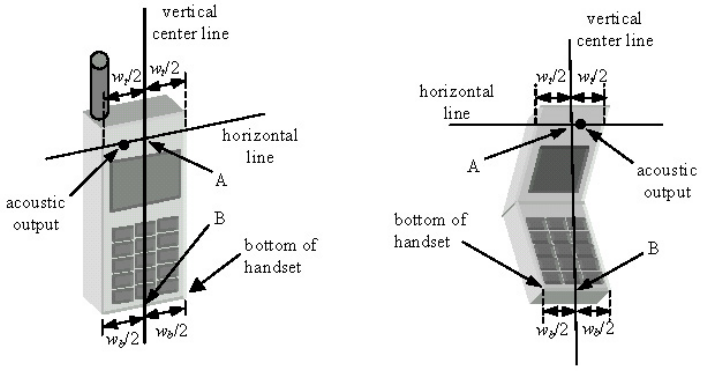

Figure 5-3
Handset Vertical Center & Horizontal Line Reference Points

6 TEST CONFIGURATION POSITIONS

6.1 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.

6.2 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 6-1), 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.

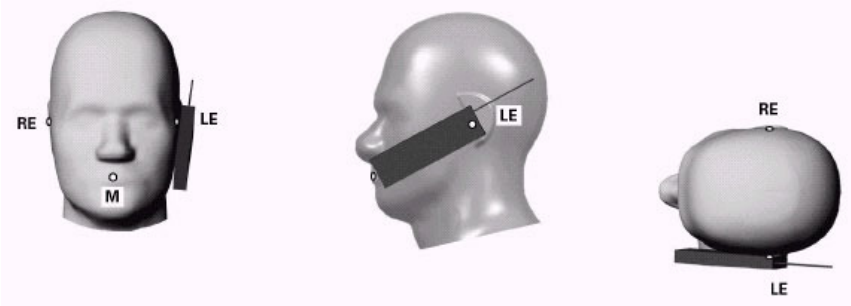

Figure 6-1 Front, Side and Top View of Cheek Position

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 6-2).

6.3 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 6-2).

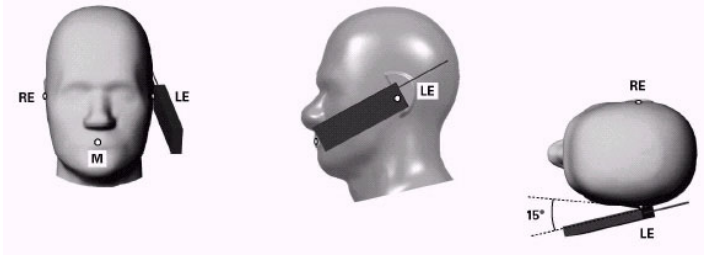

Figure 6-2 Front, Side and Top View of Ear/15º Tilt Position

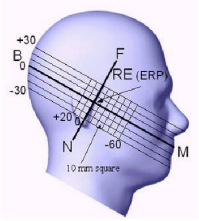

Figure 6-3
Side view w/ relevant markings

6.4 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 D04v01r03. 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.

6.5 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 6-4). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01v06 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. 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.

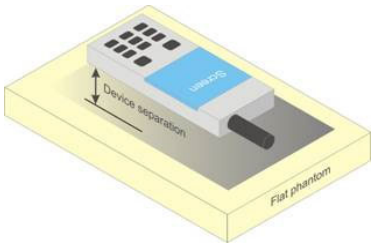

Figure 6-4
Sample Body-Worn Diagram

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.

6.6 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.

6.7 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.

6.8 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 D04v01r03 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.

6.9 Proximity Sensor Considerations

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

When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G.

The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

6.10 UMPC Mini-Tablet Configurations

Small hand-held tablets (and devices of similar form factors that are designed primarily for interactive hand-held use next to or near the body of users) require body SAR and extremity SAR evaluation. These types of mini-tablets are normally optimized for mobile web access and multimedia use. UMPC test procedures are applicable for devices with displays and overall diagonal dimension ≤ 20 cm. Devices are to be set up according to KDB publication 941225 D07v01r02 requirements and are configured with maximum output power during SAR assessment for a worst case SAR evaluation.

Per KDB Publication 941225 D07v01r02, UMPC mini-tablet devices must be tested for all surfaces and edges ≤ 25 mm from a transmitting antenna. A test separation distance of 10 mm may be considered for 1g SAR, with the addition of 10g SAR measurement at 0 mm test separation distance for all measured 1g SAR (at 10 mm) configurations to address hand exposure.

7 RF EXPOSURE LIMITS

7.1 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.

7.2 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 7-1
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 FCC MEASUREMENT PROCEDURES

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

8.1 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.

8.2 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.

8.3 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.

8.4 SAR Measurement Conditions for UMTS

8.4.1 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.

8.4.2 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.

8.4.3 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.

8.4.4 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.

8.4.5 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.

8.4.6 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.

8.5 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).

8.5.1 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.

8.5.2 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.

8.5.3 A-MPR

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

8.5.4 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.

8.5.5 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.

8.5.6 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.

8.6 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.

8.6.1 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.

8.6.2 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.

8.6.3 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.

8.6.4 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.

8.6.5 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.

8.6.6 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 guidance, 802.11ax was considered the highest order 802.11 mode. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

8.6.7 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 8.6.6). When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

8.6.8 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.

8.6.9 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.

9 RF CONDUCTED POWERS

All conducted power measurements for 2G/3G/4G/5G 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}).

9.1 GSM Conducted Powers

Table 9-1
Measured P_{max} for all DSI for GSM 850
Measured P_{max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (Head) for GSM 1900

Maximum Burst-Averaged Output Power										
		Voice	*GPRS/EDGE Data (GMSK)*				*EDGE Data (8-PSK)*			
Band	**Channel**	**GSM [dBm] CS (1 Slot)**	**GPRS [dBm] 1 Tx Slot**	**GPRS [dBm] 2 Tx Slot**	**GPRS [dBm] 3 Tx Slot**	**GPRS [dBm] 4 Tx Slot**	**EDGE [dBm] 1 Tx Slot**	**EDGE [dBm] 2 Tx Slot**	**EDGE [dBm] 3 Tx Slot**	**EDGE [dBm] 4 Tx Slot**
GSM 850	128	31.86	31.92	31.36	**30.10**	27.69	26.41	23.97	22.93	22.04
	190	31.74	31.77	31.40	**29.88**	27.79	26.42	23.79	22.86	21.96
	251	31.88	31.96	31.37	**29.76**	27.66	26.34	23.87	22.79	21.90
GSM 1900	512	29.39	29.46	27.65	**25.70**	24.05	24.98	23.72	21.79	20.86
	661	29.21	29.29	27.84	**25.79**	24.28	25.02	23.85	21.91	20.72
	810	29.53	29.61	27.73	**25.89**	24.16	24.94	23.80	21.84	20.79

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	22.66	22.72	25.17	**25.67**	24.51	17.21	17.78	18.50	18.86
	190	22.54	22.57	25.21	**25.45**	24.61	17.22	17.60	18.43	18.78
	251	22.68	22.76	25.18	**25.33**	24.48	17.14	17.68	18.36	18.72
GSM 1900	512	20.19	20.26	21.46	**21.27**	20.87	15.78	17.53	17.36	17.68
	661	20.01	20.09	21.65	**21.36**	21.10	15.82	17.66	17.48	17.54
	810	20.33	20.41	21.54	**21.46**	20.98	15.74	17.61	17.41	17.61
GSM 850	**Frame Avg.Targets:**	22.80	22.80	25.31	**25.07**	24.32	17.30	18.81	18.57	18.82
GSM 1900		20.30	20.30	21.81	**22.07**	21.32	16.30	17.81	17.57	17.82

Table 9-2

Measured P_{limit} for DSI = 2/3 (Phablet or UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active)

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	25.89	25.78	22.66	21.88	**19.73**	25.00	23.04	21.17	19.84
	661	25.76	25.77	22.78	20.72	**19.81**	25.03	23.09	20.96	19.56
	810	25.70	25.70	22.70	20.76	**20.06**	25.00	22.98	21.04	19.66

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	16.69	16.58	16.47	17.45	**16.55**	15.80	16.85	16.74	16.66
	661	16.56	16.57	16.59	16.29	**16.63**	15.83	16.90	16.53	16.38
	810	16.50	16.50	16.51	16.33	**16.88**	15.80	16.79	16.61	16.48
GSM 1900	**Frame Avg.Targets:**	16.80	16.80	16.81	16.77	**16.82**	16.30	16.81	16.77	16.82

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 9-1
Power Measurement Setup

9.2 UMTS Conducted Powers

Table 9-3
Measured P_{max} for all DSI for UMTS 850
Measured P_{max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (Head) for UMTS Band 4
Measured P_{max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (Head) UMTS Band 2

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	24.84	24.72	24.64	24.08	24.13	24.07	24.45	24.40	24.39	-
99		12.2 kbps AMR	24.84	24.70	24.56	24.08	24.07	24.05	24.42	24.39	24.40	-
6	HSDPA	Subtest 1	23.70	23.55	23.46	22.90	22.83	22.89	22.81	22.75	22.74	0
6		Subtest 2	23.71	23.54	23.43	22.90	22.81	22.90	22.84	22.77	22.73	0
6		Subtest 3	23.20	23.02	22.94	22.41	22.34	22.42	22.36	22.26	22.27	0.5
6		Subtest 4	23.18	23.01	22.92	22.36	22.31	22.41	22.34	22.25	22.24	0.5
6	HSUPA	Subtest 1	23.68	23.52	23.42	22.85	22.82	22.87	22.85	22.79	22.75	0
6		Subtest 2	21.64	21.49	21.41	20.91	20.86	20.89	20.87	20.79	20.81	2
6		Subtest 3	22.63	22.52	22.39	21.93	21.82	21.91	21.87	21.79	21.79	1
6		Subtest 4	21.64	21.48	21.40	20.90	20.85	20.94	20.89	20.80	20.80	2
6		Subtest 5	23.69	23.54	23.46	22.92	22.84	22.91	22.90	22.81	22.79	0
8	DC-HSDPA	Subtest 1	23.66	23.53	23.45	22.84	22.76	22.84	22.85	22.73	22.74	0
8		Subtest 2	23.65	23.48	23.38	22.85	22.78	22.83	22.86	22.75	22.71	0
8		Subtest 3	23.15	22.99	22.89	22.40	22.30	22.39	22.37	22.25	22.23	0.5
8		Subtest 4	23.14	22.98	22.91	22.37	22.29	22.40	22.36	22.23	22.24	0.5

Table 9-4
Measured P_{limit} for DSI = 2/3 (Phablet or UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active)

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	18.22	18.16	18.20	18.15	18.02	18.06	-
99		12.2 kbps AMR	18.17	18.11	18.19	18.16	18.13	18.04	-
6	HSDPA	Subtest 1	16.94	16.85	16.84	16.93	16.82	16.94	0
6		Subtest 2	16.93	16.80	16.88	16.94	16.73	16.75	0
6		Subtest 3	16.39	16.37	16.32	16.42	16.20	16.36	0.5
6		Subtest 4	16.35	16.35	16.36	16.47	16.29	16.37	0.5
6	HSUPA	Subtest 1	16.95	16.89	16.86	16.97	16.81	16.93	0
6		Subtest 2	15.02	14.85	14.90	14.94	14.85	14.93	2
6		Subtest 3	15.98	15.88	15.91	15.94	15.82	15.93	1
6		Subtest 4	15.01	14.90	14.90	14.98	14.85	14.93	2
6		Subtest 5	17.01	16.95	16.95	17.06	16.86	16.97	0
8	DC-HSDPA	Subtest 1	17.16	17.11	17.07	17.11	17.00	17.11	0
8		Subtest 2	17.17	17.16	17.08	17.11	17.02	17.13	0
8		Subtest 3	16.73	16.63	16.61	16.67	16.55	16.63	0.5
8		Subtest 4	16.67	16.63	16.61	16.62	16.67	16.66	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 9-2
Power Measurement Setup

9.3 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 Appendix I.

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.

9.3.1 LTE Band 12

Table 9-5
LTE Band 12 Measured P_{Max} for all DSI - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23095 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	**24.91**	0	0
	1	25	24.86		0
	1	49	24.72		0
	25	0	23.77	0-1	1
	25	12	**23.80**		1
	25	25	23.69		1
	50	0	23.66		1
16QAM	1	0	24.12	0-1	1
	1	25	24.00		1
	1	49	24.11		1
	25	0	22.69	0-2	2
	25	12	22.78		2
	25	25	22.71		2
	50	0	22.65		2
64QAM	1	0	22.86	0-2	2
	1	25	22.95		2
	1	49	22.80		2
	25	0	21.65	0-3	3
	25	12	21.67		3
	25	25	21.70		3
	50	0	21.63		3
256QAM	1	0	19.49	0-5	5
	1	25	19.80		5
	1	49	19.60		5
	25	0	19.62		5
	25	12	19.69		5
	25	25	19.65		5
	50	0	19.61		5

9.3.2 LTE Band 13

Table 9-6
LTE Band 13 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	**23.17**	0	0
	1	25	23.15		0
	1	49	23.14		0
	25	0	22.18	0-1	1
	25	12	**22.22**		1
	25	25	22.16		1
	50	0	22.17		1
16QAM	1	0	22.42	0-1	1
	1	25	22.46		1
	1	49	22.49		1
	25	0	21.19	0-2	2
	25	12	21.28		2
	25	25	21.22		2
	50	0	21.19		2
64QAM	1	0	21.40	0-2	2
	1	25	21.43		2
	1	49	21.40		2
	25	0	20.16	0-3	3
	25	12	20.23		3
	25	25	20.19		3
	50	0	20.18		3
256QAM	1	0	18.03	0-5	5
	1	25	18.40		5
	1	49	18.14		5
	25	0	18.11		5
	25	12	18.25		5
	25	25	18.17		5
	50	0	18.19		5

9.3.3 LTE Band 26

Table 9-7
LTE Band 26 (Cell) 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	**24.55**	0	0
	1	36	24.40		0
	1	74	24.30		0
	36	0	23.17	0-1	1
	36	18	23.15		1
	36	37	**23.21**		1
	75	0	23.15		1
16QAM	1	0	23.43	0-1	1
	1	36	23.51		1
	1	74	23.31		1
	36	0	22.12	0-2	2
	36	18	22.20		2
	36	37	22.17		2
	75	0	22.11		2
64QAM	1	0	22.36	0-2	2
	1	36	22.42		2
	1	74	22.28		2
	36	0	21.08	0-3	3
	36	18	21.18		3
	36	37	21.13		3
	75	0	21.12		3
256QAM	1	0	19.02	0-5	5
	1	36	19.39		5
	1	74	19.13		5
	36	0	19.12		5
	36	18	19.19		5
	36	37	19.24		5
	75	0	19.07		5

9.3.4 LTE Band 66 Antenna B

Table 9-8
LTE Band 66 (AWS) Antenna B Measured P_{Max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (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	23.13	23.83	23.84	0	0
	1	50	23.77	**24.13**	23.85		0
	1	99	23.59	23.93	23.73		0
	50	0	22.49	22.77	22.71	0-1	1
	50	25	22.68	**22.87**	22.78		1
	50	50	22.61	22.74	22.65		1
	100	0	22.57	22.74	22.66		1
16QAM	1	0	22.49	22.86	23.02	0-1	1
	1	50	22.81	23.31	23.00		1
	1	99	22.73	23.00	22.77		1
	50	0	21.51	21.78	21.75	0-2	2
	50	25	21.70	21.86	21.77		2
	50	50	21.62	21.78	21.66		2
	100	0	21.55	21.80	21.70		2
64QAM	1	0	21.39	21.62	22.01	0-2	2
	1	50	21.88	22.05	21.96		2
	1	99	21.71	21.77	21.80		2
	50	0	20.49	20.76	20.76	0-3	3
	50	25	20.72	20.87	20.82		3
	50	50	20.65	20.76	20.63		3
	100	0	20.69	20.75	20.77		3
256QAM	1	0	18.24	18.52	18.62	0-5	5
	1	50	18.90	19.23	18.80		5
	1	99	18.67	18.64	18.54		5
	50	0	18.52	18.78	18.77		5
	50	25	18.67	18.86	18.81		5
	50	50	18.69	18.77	18.67		5
	100	0	18.57	18.76	18.72		5

Table 9-9
LTE Band 66 (AWS) Antenna B Measured P_{limit} for DSI = 2/3 (Phablet or UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 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	17.25	17.56	17.90	0	0
	1	50	17.76	**18.16**	17.91		0
	1	99	17.72	17.78	17.86		0
	50	0	17.56	17.90	17.85	0-1	0
	50	25	17.95	**18.05**	18.00		0
	50	50	17.66	17.80	17.75		0
	100	0	17.65	17.87	17.79		0
16QAM	1	0	17.52	18.13	18.10	0-1	0
	1	50	17.84	18.25	18.06		0
	1	99	17.72	17.80	17.90		0
	50	0	17.54	17.88	17.86	0-2	0
	50	25	17.80	17.96	17.89		0
	50	50	17.75	17.83	17.78		0
	100	0	17.72	17.83	17.77		0
64QAM	1	0	17.44	17.74	18.02	0-2	0
	1	50	17.85	18.16	18.10		0
	1	99	17.65	17.84	17.83		0
	50	0	17.55	17.85	17.82	0-3	0
	50	25	17.73	18.13	17.85		0
	50	50	17.67	17.82	17.75		0
	100	0	17.65	17.86	17.77		0
256QAM	1	0	17.33	17.57	17.65	0-5	0
	1	50	17.66	17.97	17.96		0
	1	99	17.63	17.81	17.56		0
	50	0	17.50	17.81	17.78		0
	50	25	17.74	17.89	17.77		0
	50	50	17.67	17.84	17.70		0
	100	0	17.63	17.88	17.79		0

9.3.5 LTE Band 66 Antenna F

Table 9-10
LTE Band 66 (AWS) Antenna F Measured P_{limit} for DSI = 5 (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	22.72	22.50	22.68	0	0
	1	50	**23.06**	22.76	22.98		0
	1	99	22.74	22.48	22.85		0
	50	0	22.82	22.67	22.68	0-1	0
	50	25	**23.08**	22.77	22.94		0
	50	50	22.85	22.61	22.78		0
	100	0	22.87	22.62	22.64		0
16QAM	1	0	23.00	22.49	22.97	0-1	0
	1	50	23.05	22.82	23.06		0
	1	99	22.74	22.60	23.05		0
	50	0	22.46	22.21	22.25	0-2	0.2
	50	25	22.52	22.25	22.47		0.2
	50	50	22.35	22.09	22.33		0.2
	100	0	22.33	22.26	22.20		0.2
64QAM	1	0	22.67	21.95	22.48	0-2	0.2
	1	50	22.61	22.54	22.55		0.2
	1	99	22.57	22.28	22.56		0.2
	50	0	21.51	21.25	21.17	0-3	1.2
	50	25	21.41	21.27	21.37		1.2
	50	50	21.31	21.21	21.30		1.2
	100	0	21.36	21.11	21.21		1.2
256QAM	1	0	19.20	19.00	18.87	0-5	3.2
	1	50	19.48	19.42	19.38		3.2
	1	99	19.14	19.10	19.11		3.2
	50	0	19.38	19.22	19.17		3.2
	50	25	19.33	19.24	19.47		3.2
	50	50	19.15	19.11	19.14		3.2
	100	0	19.30	19.08	19.15		3.2

Table 9-11
LTE Band 66 (AWS) Antenna F Measured P_{limit} for DSI = 1 (Body-worn, or Phablet with grip sensor inactive), DSI = 3 (Phablet with grip sensor active), or DSI = 7 (Hotspot Mode), and/or DSI = 9 (Earjack active) - 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	17.67	17.78	17.92	0	0
	1	50	17.91	17.93	**18.20**		0
	1	99	17.72	17.85	17.85		0
	50	0	17.77	17.96	17.95	0-1	0
	50	25	17.94	17.99	**18.25**		0
	50	50	17.87	17.94	17.93		0
	100	0	17.92	17.91	17.91		0
16QAM	1	0	17.79	17.88	18.28	0-1	0
	1	50	18.21	18.20	18.29		0
	1	99	17.93	18.01	18.14		0
	50	0	17.82	17.95	17.94	0-2	0
	50	25	17.99	18.02	18.01		0
	50	50	17.93	17.93	17.92		0
	100	0	17.90	17.95	17.95		0
64QAM	1	0	17.85	17.89	18.12	0-2	0
	1	50	18.10	18.27	18.21		0
	1	99	17.89	17.95	18.09		0
	50	0	17.82	17.97	17.94	0-3	0
	50	25	18.01	18.02	18.01		0
	50	50	17.93	17.94	17.93		0
	100	0	17.90	17.94	17.96		0
256QAM	1	0	17.89	17.91	17.90	0-5	0
	1	50	18.07	18.21	18.18		0
	1	99	17.93	18.00	17.86		0
	50	0	17.82	17.95	17.98		0
	50	25	18.01	18.00	18.04		0
	50	50	17.92	17.92	17.95		0
	100	0	17.93	17.91	17.96		0

9.3.6 LTE Band 4 Antenna F

Table 9-12
LTE Band 4 (AWS) Antenna F Measured P_{limit} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), DSI = 2/3 (Phablet or UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 20 MHz Bandwidth

LTE Band 4 (AWS) 20 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 20175 (1732.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
QPSK	1	0	18.00	0	0
	1	50	**18.38**		0
	1	99	17.95		0
	50	0	18.10	0-1	0
	50	25	18.20		0
	50	50	**18.33**		0
	100	0	18.23		0
16QAM	1	0	18.07	0-1	0
	1	50	18.45		0
	1	99	18.08		0
	50	0	17.94	0-2	0
	50	25	18.04		0
	50	50	18.09		0
	100	0	17.99		0
64QAM	1	0	17.92	0-2	0
	1	50	18.26		0
	1	99	18.08		0
	50	0	17.93	0-3	0
	50	25	18.08		0
	50	50	18.07		0
	100	0	17.98		0
256QAM	1	0	17.94	0-5	0
	1	50	18.28		0
	1	99	18.05		0
	50	0	17.92		0
	50	25	18.02		0
	50	50	18.06		0
	100	0	17.96		0

9.3.7 LTE Band 25

Table 9-13
LTE Band 25 (PCS) Antenna B Measured P_{Max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (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	23.69	23.76	23.64	0	0
	1	50	23.91	23.84	23.74		0
	1	99	**23.92**	23.77	23.72		0
	50	0	**22.78**	22.69	22.61	0-1	1
	50	25	22.77	22.69	22.70		1
	50	50	22.76	22.77	22.69		1
	100	0	22.72	22.60	22.58		1
16QAM	1	0	22.99	22.92	22.90	0-1	1
	1	50	23.04	22.90	23.21		1
	1	99	22.91	23.05	22.76		1
	50	0	21.73	21.74	21.65	0-2	2
	50	25	21.83	21.72	21.71		2
	50	50	21.77	21.75	21.70		2
	100	0	21.75	21.66	21.61		2
64QAM	1	0	21.92	21.93	21.80	0-2	2
	1	50	22.03	21.91	21.89		2
	1	99	21.90	21.93	21.69		2
	50	0	20.77	20.77	20.60	0-3	3
	50	25	20.86	20.71	20.72		3
	50	50	20.78	20.78	20.66		3
	100	0	20.72	20.62	20.57		3
256QAM	1	0	18.49	18.46	18.34	0-5	5
	1	50	19.00	18.90	18.86		5
	1	99	18.68	18.65	18.49		5
	50	0	18.56	18.56	18.41		5
	50	25	18.81	18.67	18.71		5
	50	50	18.77	18.75	18.67		5
	100	0	18.71	18.61	18.58		5

Table 9-14
LTE Band 25 (PCS) Antenna B Measured P_{limit} for DSI = 2/3 (Phablet or UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 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	17.82	17.91	17.66	0	0
	1	50	17.90	17.99	17.77		0
	1	99	17.88	**18.03**	17.75		0
	50	0	17.77	**17.83**	17.71	0-1	0
	50	25	17.81	17.73	17.75		0
	50	50	17.81	17.78	17.75		0
	100	0	17.77	17.68	17.64		0
16QAM	1	0	18.00	18.01	17.97	0-1	0
	1	50	18.04	18.09	18.07		0
	1	99	17.97	17.97	17.79		0
	50	0	17.81	17.83	17.67	0-2	0
	50	25	17.80	17.77	17.78		0
	50	50	17.89	17.83	17.73		0
	100	0	17.75	17.65	17.62		0
64QAM	1	0	17.88	17.97	18.02	0-2	0
	1	50	18.08	18.03	18.07		0
	1	99	17.95	18.06	17.87		0
	50	0	17.80	17.84	17.68	0-3	0
	50	25	17.87	17.73	17.78		0
	50	50	17.83	17.85	17.71		0
	100	0	17.77	17.69	17.66		0
256QAM	1	0	17.45	17.52	17.38	0-5	0
	1	50	17.97	17.90	17.91		0
	1	99	17.66	17.66	17.51		0
	50	0	17.65	17.65	17.53		0
	50	25	17.87	17.79	17.77		0
	50	50	17.77	17.80	17.70		0
	100	0	17.77	17.69	17.52		0

9.3.8 LTE Band 41

Table 9-15
LTE Band 41 Antenna B PC3 Measured P_{Limit} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (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	21.52	21.53	21.37	21.44	21.41	0	0
	1	50	21.50	21.52	21.76	21.67	**21.84**		0
	1	99	21.41	21.54	21.35	21.31	21.76		0
	50	0	21.51	21.47	21.57	21.68	21.68	0-1	0
	50	25	21.56	21.48	21.79	21.72	21.83		0
	50	50	21.54	21.55	21.68	21.66	**21.87**		0
	100	0	21.51	21.40	21.67	21.65	21.76		0
16QAM	1	0	21.55	21.46	21.35	21.40	21.45	0-1	0
	1	50	21.66	21.51	21.79	21.81	21.90		0
	1	99	21.46	21.57	21.32	21.21	21.77		0
	50	0	21.44	21.38	21.40	21.54	21.55	0-2	0
	50	25	21.48	21.38	21.69	21.63	21.71		0
	50	50	21.44	21.42	21.60	21.55	21.78		0
	100	0	21.39	21.29	21.57	21.51	21.61		0
64QAM	1	0	21.56	21.48	21.36	21.46	21.39	0-2	0
	1	50	21.45	21.52	21.77	21.76	21.84		0
	1	99	21.44	21.53	21.38	21.28	21.71		0
	50	0	20.43	20.31	20.48	20.56	20.57	0-3	1
	50	25	20.48	20.39	20.67	20.62	20.73		1
	50	50	20.44	20.43	20.57	20.55	20.81		1
	100	0	20.39	20.29	20.57	20.54	20.63		1
256QAM	1	0	18.02	18.00	18.22	18.29	18.32	0-5	3
	1	50	18.48	18.46	18.72	18.69	18.82		3
	1	99	18.11	18.06	18.20	18.22	18.71		3
	50	0	18.31	18.30	18.47	18.58	18.59		3
	50	25	18.48	18.40	18.70	18.66	18.72		3
	50	50	18.41	18.35	18.58	18.59	18.80		3
	100	0	18.44	18.33	18.58	18.52	18.67		3

Table 9-16
LTE Band 41 Antenna B PC2 Measured P_{Limit} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (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	23.42	23.38	23.25	23.42	23.27	0	0
	1	50	23.52	23.47	23.59	23.61	**23.72**		0
	1	99	23.35	23.52	23.30	23.27	23.68		0
	50	0	23.22	23.24	23.32	23.39	23.35	0-1	0
	50	25	23.29	23.24	23.50	23.44	23.54		0
	50	50	23.24	23.28	23.40	23.36	**23.61**		0
	100	0	23.18	23.10	23.40	23.35	23.41		0

Table 9-17
LTE Band 41 Antenna B PC3 Measured P_{limit} for DSI = 2/3 (Phablet/UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 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	17.65	17.51	17.44	17.49	17.44	0	0
	1	50	17.61	17.58	17.78	17.78	**18.08**		0
	1	99	17.55	17.64	17.42	17.29	17.91		0
	50	0	17.61	17.54	17.64	17.72	17.69	0-1	0
	50	25	17.69	17.56	17.82	17.71	17.84		0
	50	50	17.61	17.63	17.74	17.69	**17.91**		0
	100	0	17.56	17.43	17.75	17.66	17.77		0
16QAM	1	0	17.59	17.52	17.39	17.44	17.56	0-1	0
	1	50	17.65	17.62	17.75	17.73	18.04		0
	1	99	17.56	17.62	17.43	17.31	17.72		0
	50	0	17.57	17.49	17.65	17.68	17.69	0-2	0
	50	25	17.64	17.49	17.85	17.74	17.85		0
	50	50	17.61	17.60	17.70	17.67	17.92		0
	100	0	17.54	17.41	17.71	17.63	17.74		0
64QAM	1	0	17.74	17.60	17.52	17.65	17.55	0-2	0
	1	50	17.76	17.80	17.86	17.93	18.00		0
	1	99	17.62	17.70	17.57	17.50	17.83		0
	50	0	17.54	17.55	17.62	17.69	17.70	0-3	0
	50	25	17.63	17.51	17.82	17.77	17.86		0
	50	50	17.57	17.58	17.77	17.70	17.91		0
	100	0	17.24	17.43	17.72	17.69	17.76		0
256QAM	1	0	17.56	17.04	17.49	17.46	17.32	0-5	0
	1	50	17.62	17.69	17.87	17.47	17.92		0
	1	99	17.36	17.29	17.49	17.73	17.70		0
	50	0	17.40	17.41	17.68	17.31	17.72		0
	50	25	17.64	17.66	17.83	17.70	17.82		0
	50	50	17.60	17.55	17.74	17.79	17.94		0
	100	0	17.56	17.52	17.77	17.69	17.75		0

Table 9-18
LTE Band 41 Antenna B PC2 Measured P_{limit} for DSI = 2/3 (Phablet/UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 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	19.48	19.41	19.32	19.39	19.34	0	0
	1	50	19.59	19.46	19.65	19.72	**19.73**		0
	1	99	19.42	19.61	19.28	19.28	19.62		0
	50	0	19.25	19.23	19.36	19.39	19.41	0-1	0
	50	25	19.31	19.24	19.55	19.47	19.56		0
	50	50	19.31	19.37	19.42	19.38	**19.60**		0
	100	0	19.23	19.14	19.41	19.35	19.50		0

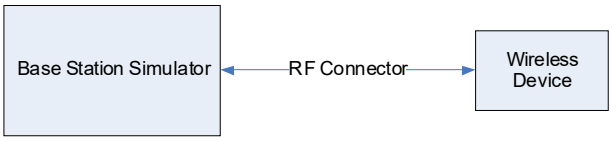

Figure 9-3
Power Measurement Setup

9.4 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 Appendix I.

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.

9.4.1 NR Band n12

Table 9-19
NR Band n12 Measured P_{Max} for all DSI - 15 MHz Bandwidth

NR Band n12 15 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	141500 (707.5 MHz) Conducted Power [dBm]	MPR Allowed per 3GPP [dB]	MPR [dB]
DFT-s-OFDM π/2 BPSK	1	1	23.42	0	0.0
	1	40	23.57		0.0
	1	77	23.61		0.0
	36	0	23.15	0-0.5	0.5
	36	22	23.65	0	0.0
	36	43	23.10	0-0.5	0.5
	75	0	23.19		0.5
DFT-s-OFDM QPSK	1	1	23.49	0	0.0
	1	40	**23.62**		0.0
	1	77	23.53		0.0
	36	0	22.51	0-1	1.0
	36	22	**23.61**	0	0.0
	36	43	22.58	0-1	1.0
	75	0	22.65		1.0
DFT-s-OFDM 16QAM	1	1	22.90	0-1	1.0
CP-OFDM QPSK	1	1	21.90	0-1.5	1.5

9.4.2 NR Band n5

Table 9-20
NR Band n5 Measured P_{Max} for all DSI - 20 MHz Bandwidth

NR Band n5 20 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	167300 (836.5 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	23.53	0	0.0
	1	53	23.61		0.0
	1	104	23.54		0.0
	50	0	23.15	0-0.5	0.5
	50	28	23.65	0	0.0
	50	56	23.07	0-0.5	0.5
	100	0	23.23		0.5
DFT-s-OFDM QPSK	1	1	23.63	0	0.0
	1	53	**24.13**		0.0
	1	104	23.64		0.0
	50	0	22.67	0-1	1.0
	50	28	**24.10**	0	0.0
	50	56	22.58	0-1	1.0
	100	0	22.70		1.0
DFT-s-OFDM 16QAM	1	1	22.54	0-1	1.0
CP-OFDM QPSK	1	1	22.47	0-1.5	1.5

9.4.3 NR Band n66 Antenna B

Table 9-21
NR Band n66 Antenna B Measured P_{Max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (Head) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel				
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	24.20	23.87	24.02	0	0.0
	1	53	24.10	23.74	23.78		0.0
	1	104	23.67	24.15	23.92		0.0
	50	0	22.93	23.04	23.22	0-0.5	0.5
	50	28	24.10	24.05	24.02	0	0.0
	50	56	23.30	23.62	23.33	0-0.5	0.5
	100	0	23.90	23.68	23.62		0.5
DFT-s-OFDM QPSK	1	1	**24.18**	23.47	23.80	0	0.0
	1	53	24.16	23.45	23.55		0.0
	1	104	23.75	24.05	23.69		0.0
	50	0	23.00	22.96	23.17	0-1	1.0
	50	28	**23.59**	23.57	23.56	0	0.0
	50	56	23.27	23.38	22.98	0-1	1.0
	100	0	23.01	22.93	23.00		1.0
DFT-s-OFDM 16QAM	1	1	22.85	22.54	22.64	0-1	1.0
CP-OFDM QPSK	1	1	22.39	21.95	22.01	0-1.5	1.5

Table 9-22
NR Band n66 Antenna B Measured P_{limit} for DSI = 2/3 (Phablet/UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	18.83	18.82	18.82	0	0.0
	1	53	18.86	18.72	18.70		0.0
	1	104	18.90	18.79	18.74		0.0
	50	0	18.89	18.84	18.78	0-0.5	0.0
	50	28	18.88	18.88	18.80	0	0.0
	50	56	18.92	18.81	18.82	0-0.5	0.0
	100	0	18.91	18.86	18.83		0.0
DFT-s-OFDM QPSK	1	1	18.76	18.87	18.79	0	0.0
	1	53	18.70	**18.90**	18.77		0.0
	1	104	18.85	18.88	18.78		0.0
	50	0	18.83	18.89	18.71	0-1	0.0
	50	28	18.84	**18.95**	18.80	0	0.0
	50	56	18.90	18.87	18.75	0-1	0.0
	100	0	18.89	18.88	18.77		0.0
DFT-s-OFDM 16QAM	1	1	18.75	18.86	18.71	0-1	0.0
CP-OFDM QPSK	1	1	18.85	18.90	18.75	0-1.5	0.0

9.4.4 NR Band n66 Antenna F

Table 9-23
NR Band n66 Antenna F Measured P_{limit} for DSI = 4/5 (Head) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	22.12	22.33	22.43	0	0.0
	1	53	22.10	22.37	22.45		0.0
	1	104	22.23	22.46	22.62		0.0
	50	0	22.32	22.42	22.54	0-0.5	0.0
	50	28	22.32	22.47	22.57	0	0.0
	50	56	22.34	22.54	22.58	0-0.5	0.0
	100	0	22.35	22.47	22.61		0.0
DFT-s-OFDM QPSK	1	1	22.11	22.20	22.34	0	0.0
	1	53	22.10	22.27	22.33		0.0
	1	104	22.18	22.37	**22.57**		0.0
	50	0	22.33	22.43	22.58	0-1	0.0
	50	28	22.35	22.45	22.58	0	0.0
	50	56	22.38	22.49	**22.62**	0-1	0.0
	100	0	22.40	22.46	22.56		0.0
DFT-s-OFDM 16QAM	1	1	22.59	22.61	22.82	0-1	0.0
CP-OFDM QPSK	1	1	21.69	21.75	21.89	0-1.5	0.0

Table 9-24
NR Band n66 Antenna F Measured P_{limit} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), DSI = 2/3 (Phablet/UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 20 MHz Bandwidth

NR Band n66 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	344000 (1720 MHz)	349000 (1745 MHz)	354000 (1770 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	19.21	19.30	19.25	0	0.0
	1	53	19.25	19.36	19.32		0.0
	1	104	19.37	19.44	19.40		0.0
	50	0	19.39	19.32	19.31	0-0.5	0.0
	50	28	19.40	19.41	19.34	0	0.0
	50	56	19.43	19.45	19.43	0-0.5	0.0
	100	0	19.43	19.40	19.39		0.0
DFT-s-OFDM QPSK	1	1	19.20	19.20	19.26	0	0.0
	1	53	19.18	19.24	19.24		0.0
	1	104	19.31	19.42	**19.45**		0.0
	50	0	19.39	19.33	19.41	0-1	0.0
	50	28	19.37	19.36	19.43	0	0.0
	50	56	19.42	19.44	**19.46**	0-1	0.0
	100	0	19.39	19.41	19.44		0.0
DFT-s-OFDM 16QAM	1	1	19.33	19.38	19.42	0-1	0.0
CP-OFDM QPSK	1	1	19.34	19.46	19.48	0-1.5	0.0

9.4.5 NR Band n25 Antenna B

Table 9-25
NR Band n25 Antenna B Measured P_{Max} for DSI = 0/1 (Body-worn, or Phablet/UMPC with grip sensor inactive), or DSI = 4/5 (Head) - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	23.28	23.26	23.16	0	0.0
	1	53	23.26	23.24	23.17		0.0
	1	104	23.16	23.14	23.17		0.0
	50	0	22.84	22.90	22.90	0-0.5	0.5
	50	28	23.42	23.33	23.40	0	0.0
	50	56	22.93	22.84	22.43	0-0.5	0.5
	100	0	22.99	22.90	22.93		0.5
DFT-s-OFDM QPSK	1	1	23.17	23.20	23.32	0	0.0
	1	53	**23.35**	23.11	23.28		0.0
	1	104	23.16	23.13	22.83		0.0
	50	0	22.35	22.36	22.47	0-1	1.0
	50	28	**23.48**	23.37	23.47	0	0.0
	50	56	22.47	22.31	22.49	0-1	1.0
	100	0	22.49	22.36	22.47		1.0
DFT-s-OFDM 16QAM	1	1	22.53	22.50	22.53	0-1	1.0
CP-OFDM QPSK	1	1	21.87	21.77	21.84	0-1.5	1.5

Table 9-26
NR Band n25 Antenna B Measured P_{limit} for DSI = 2/3 (Phablet/UMPC with grip sensor active), or DSI = 6/7 (Hotspot Mode), and/or DSI = 8/9 (Earjack active) - 20 MHz Bandwidth

NR Band n25 20 MHz Bandwidth							
			Channel			MPR Allowed per 3GPP [dB]	MPR [dB]
Modulation	RB Size	RB Offset	372000 (1860 MHz)	376500 (1882.5 MHz)	381000 (1905 MHz)		
			Conducted Power [dBm]				
DFT-s-OFDM π/2 BPSK	1	1	17.79	17.84	17.72	0	0.0
	1	53	17.81	17.74	17.71		0.0
	1	104	17.75	17.66	17.62		0.0
	50	0	17.85	17.84	17.84	0-0.5	0.0
	50	28	17.91	17.86	17.81	0	0.0
	50	56	17.88	17.85	17.79	0-0.5	0.0
	100	0	17.92	17.89	17.80		0.0
DFT-s-OFDM QPSK	1	1	17.60	18.04	**18.14**	0	0.0
	1	53	17.92	17.62	17.73		0.0
	1	104	17.53	17.53	17.54		0.0
	50	0	17.77	18.18	17.86	0-1	0.0
	50	28	17.86	17.87	**18.19**	0	0.0
	50	56	18.18	18.18	17.82	0-1	0.0
	100	0	17.82	17.82	18.13		0.0
DFT-s-OFDM 16QAM	1	1	18.00	18.00	17.99	0-1	0.0
CP-OFDM QPSK	1	1	17.67	17.72	18.04	0-1.5	0.0

9.4.6 NR Band n41 Antenna F

Table 9-27
NR Band n41 Antenna F Measured P_{Limit} for all DSI - 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 π/2 BPSK	1	1	18.33	0	0.0
	1	137	18.36		0.0
	1	271	18.36		0.0
	135	0	18.32	0-0.5	0.0
	135	69	18.33	0	0.0
	135	138	18.32	0-0.5	0.0
	270	0	18.30		0.0
DFT-s-OFDM QPSK	1	1	18.35	0	0.0
	1	137	18.37		0.0
	1	271	**18.40**		0.0
	135	0	**18.37**	0-1	0.0
	135	69	18.34	0	0.0
	135	138	18.33	0-1	0.0
	270	0	18.34		0.0
DFT-s-OFDM 16QAM	1	1	18.18	0-1	0.0
CP-OFDM QPSK	1	1	18.20	0-1.5	0.0

9.4.7 NR Band n41 Antenna B, E, C

Table 9-28
NR Band n41 Antenna B, E, C Measured P_{Limit} for all DSI – 100 MHz Bandwidth

NR Band n41 100 MHz Bandwidth	
	Channel
Antenna	518598 (2592.99 MHz)
	Conducted Power [dBm]
SRS #2 Ant B	14.68
SRS #3 Ant E	15.02
SRS #4 Ant C	10.85

9.4.8 NR Band n77 DoD Antenna F

Table 9-29
NR Band n77 DoD Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	633334 (3500.01 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	17.55	0	0.0
	1	137	17.84		0.0
	1	271	18.07		0.0
	135	0	17.73	0-0.5	0.0
	135	69	17.74	0	0.0
	135	138	17.83	0-0.5	0.0
	270	0	17.70		0.0
DFT-s-OFDM QPSK	1	1	17.62	0	0.0
	1	137	17.84		0.0
	1	271	**18.05**		0.0
	135	0	17.74	0-1	0.0
	135	69	17.71	0	0.0
	135	138	**17.81**	0-1	0.0
	270	0	17.72		0.0
DFT-s-OFDM 16QAM	1	1	17.77	0-1	0.0
CP-OFDM QPSK	1	1	17.65	0-1.5	0.0

9.4.1 NR Band n77 DoD Antenna E

Table 9-30
NR Band n77 DoD Measured P_{Limit} for all DSI - 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth					
			Channel		
Modulation	RB Size	RB Offset	633334 (3500.01 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
DFT-s-OFDM π/2 BPSK	1	1	16.42	0	0.0
	1	137	16.63		0.0
	1	271	16.77		0.0
	135	0	16.52	0-0.5	0.0
	135	69	16.48	0	0.0
	135	138	16.50	0-0.5	0.0
	270	0	16.46		0.0
DFT-s-OFDM QPSK	1	1	**16.92**	0	0.0
	1	137	16.78		0.0
	1	271	16.88		0.0
	135	0	**16.91**	0-1	0.0
	135	69	16.75	0	0.0
	135	138	16.70	0-1	0.0
	270	0	16.88		0.0
DFT-s-OFDM 16QAM	1	1	16.78	0-1	0.0
CP-OFDM QPSK	1	1	16.79	0-1.5	0.0

9.4.1 NR Band n77 DoD Antenna G, D

Table 9-31
NR Band n77 DoD Measured P_{Limit} for all DSI – 100 MHz Bandwidth

NR Band n77 DoD 100 MHz Bandwidth		
	Channel	
Antenna	633334 (3500.01 MHz)	
	Conducted Power [dBm]	
SRS #3 Ant G	14.30	
SRS #4 Ant D	15.77	

9.4.1 NR Band n77 C-Band Antenna F

Table 9-32
NR Band n77 C-Band Measured P_{Limit} for all DSI - 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 π/2 BPSK	1	1	17.81	18.14	0	0.0
	1	137	17.94	18.45		0.0
	1	271	17.81	18.47		0.0
	135	0	17.88	18.28	0-0.5	0.0
	135	69	17.86	18.42	0	0.0
	135	138	17.77	18.39	0-0.5	0.0
	270	0	17.76	18.29		0.0
DFT-s-OFDM QPSK	1	1	17.85	18.13	0	0.0
	1	137	18.00	18.45		0.0
	1	271	17.89	**18.48**		0.0
	135	0	17.91	18.26	0-1	0.0
	135	69	17.87	**18.42**	0	0.0
	135	138	17.80	18.41	0-1	0.0
	270	0	17.83	18.29		0.0
DFT-s-OFDM 16QAM	1	1	17.64	18.39	0-1	0.0
CP-OFDM QPSK	1	1	17.68	17.85	0-1.5	0.0

9.4.2 NR Band n77 C-Band Antenna E

Table 9-33
NR Band n77 C-Band Measured P_{Limit} for all DSI - 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 π/2 BPSK	1	1	16.87	17.26	0	0.0
	1	137	17.12	17.57		0.0
	1	271	17.10	17.49		0.0
	135	0	16.96	17.39	0-0.5	0.0
	135	69	16.99	17.46	0	0.0
	135	138	16.97	17.42	0-0.5	0.0
	270	0	16.98	17.35		0.0
DFT-s-OFDM QPSK	1	1	16.89	17.30	0	0.0
	1	137	17.12	**17.58**		0.0
	1	271	17.02	17.54		0.0
	135	0	16.96	17.36	0-1	0.0
	135	69	16.99	**17.48**	0	0.0
	135	138	17.00	17.44	0-1	0.0
	270	0	16.98	17.39		0.0
DFT-s-OFDM 16QAM	1	1	17.00	17.46	0-1	0.0
CP-OFDM QPSK	1	1	16.49	17.10	0-1.5	0.0

9.4.1 NR Band n77 C-Band Antenna G, D

Table 9-34
NR Band n77 C-Band Measured P_{Limit} for all DSI – 100 MHz Bandwidth

NR Band n77 100 MHz Bandwidth		
	Channel	
Antenna	650000 (3750 MHz)	662000 (3930 MHz)
	Conducted Power [dBm]	
SRS #3 Ant G	14.10	15.80
SRS #4 Ant D	14.65	14.30

Figure 9-4
Power Measurement Setup – NR FDD

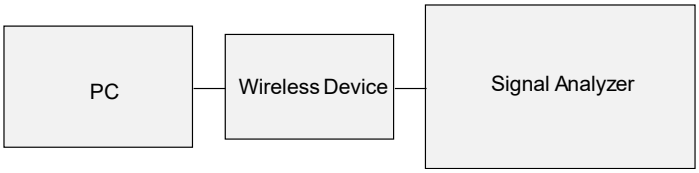

Figure 9-5
Power Measurement Setup – NR TDD

9.5 WLAN Conducted Powers

Table 9-35
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	19.00	17.46	17.34	17.21
2437	6	18.73	17.35	17.23	17.69
2462	11	18.24	17.57	17.53	17.50

Table 9-36
2.4 GHz WLAN Maximum Average RF Power – MIMO

2.4GHz 802.11b Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	18.85	18.92	21.90
2437	6	18.77	18.73	21.76
2462	11	18.61	18.24	21.44

Table 9-37
2.4 GHz WLAN Reduced Average RF Power with RCV Active – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	12.45	12.36	12.05	12.58
2437	6	12.94	12.45	12.69	12.78
2462	11	12.80	12.77	12.21	12.36

Table 9-38
2.4 GHz WLAN Reduced Average RF Power with RCV Active – MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	12.46	12.05	15.27
2437	6	12.47	12.69	15.59
2462	11	12.35	12.21	15.29

Table 9-39
2.4 GHz WLAN Reduced Average RF Power During Conditions with 5G NR and/or 5/6 GHz WLAN – Ant 2

2.4GHz Conducted Power [dBm]					
Freq [MHz]	Channel	IEEE Transmission Mode			
		802.11b	802.11g	802.11n	802.11ax
		Average	Average	Average	Average
2412	1	14.65	14.21	14.37	14.18
2437	6	14.79	14.36	14.44	14.32
2462	11	14.68	14.82	14.59	14.66

Table 9-40
2.4 GHz WLAN Reduced Average RF Powers During Conditions with 5/6 GHz WLAN and/or 5G NR - MIMO

2.4GHz 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
2412	1	14.69	14.44	17.58
2437	6	14.51	14.47	17.50
2462	11	14.82	14.78	17.81

Table 9-41
5 GHz WLAN Maximum Average RF Power – MIMO

5GHz (20MHz) 802.11n Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5180	36	17.61	17.15	20.40
5200	40	17.53	17.17	20.36
5220	44	17.67	17.65	20.67
5240	48	17.73	17.33	20.54
5260	52	17.56	17.69	20.64
5280	56	17.50	17.74	20.63
5300	60	17.64	17.45	20.56
5320	64	17.61	17.54	20.59
5500	100	17.53	17.14	20.35
5600	120	17.60	17.07	20.35
5620	124	17.53	16.98	20.27
5720	144	17.60	17.14	20.39
5745	149	17.51	17.09	20.32
5785	157	17.39	17.04	20.23
5825	165	17.71	17.20	20.47
5845	169	17.64	17.05	20.37
5865	173	17.02	16.99	20.02
5885	177	17.00	16.92	19.97

Table 9-42
5 GHz WLAN Reduced Average RF Power with RCV Active - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	11.62	11.40	14.52
5290	58	11.32	10.95	14.15
5530	106	11.75	10.78	14.30
5610	122	11.74	10.45	14.15
5690	138	11.85	10.24	14.13
5775	155	11.59	10.74	14.20
5855	171	11.80	10.76	14.32

Table 9-43
5 GHz WLAN Reduced Average RF Power During Conditions with 5G NR and/or 2.4 GHz WLAN - MIMO

5GHz (80MHz) 802.11ac Conducted Power [dBm]				
Freq [MHz]	Channel	ANT1	ANT2	MIMO
5210	42	14.60	14.74	17.68
5290	58	14.45	14.12	17.30
5530	106	14.72	14.00	17.39
5610	122	14.73	13.34	17.10
5690	138	14.59	13.25	16.98
5775	155	14.69	14.17	17.45
5855	171	14.81	14.32	17.58

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.

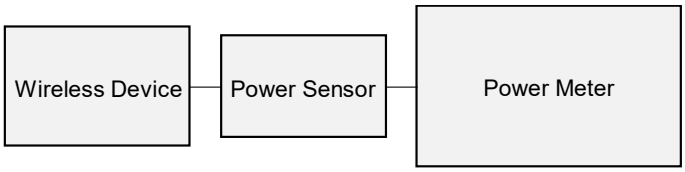

Figure 9-6
Power Measurement Setup

9.1 Bluetooth Conducted Powers

Table 9-44
Bluetooth Maximum Average RF Power– Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	18.57	71.928
2441	1.0	GFSK	ePA	39	18.77	75.266
2480	1.0	GFSK	ePA	78	18.58	72.078
2402	2.0	π/4-DQPSK	ePA	0	15.55	35.892
2441	2.0	π/4-DQPSK	ePA	39	15.16	32.817
2480	2.0	π/4-DQPSK	ePA	78	14.85	30.514
2402	3.0	8DPSK	ePA	0	15.56	35.975
2441	3.0	8DPSK	ePA	39	15.18	32.984
2480	3.0	8DPSK	ePA	78	15.14	32.651

Table 9-45
Bluetooth Maximum Average RF Power– Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	15.30	33.908
2441	1.0	GFSK	ePA	39	15.82	38.186
2480	1.0	GFSK	ePA	78	14.01	25.188
2402	2.0	π/4-DQPSK	ePA	0	12.25	16.784
2441	2.0	π/4-DQPSK	ePA	39	12.89	19.440
2480	2.0	π/4-DQPSK	ePA	78	11.07	12.800
2402	3.0	8DPSK	ePA	0	12.29	16.959
2441	3.0	8DPSK	ePA	39	12.97	19.792
2480	3.0	8DPSK	ePA	78	11.15	13.032

Table 9-46
Bluetooth Reduced Average RF Power with RCV Active – Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	11.00	12.589
2441	1.0	GFSK	ePA	39	11.14	13.002
2480	1.0	GFSK	ePA	78	11.11	12.912

Table 9-47
Bluetooth Reduced Average RF Power with RCV Active – Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	8.44	6.982
2441	1.0	GFSK	ePA	39	9.10	8.128
2480	1.0	GFSK	ePA	78	7.50	5.623

Table 9-48
Bluetooth Reduced Average RF Power During Conditions with 5/6 GHz WLAN and/or 5G NR – Antenna 1

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	14.50	28.184
2441	1.0	GFSK	ePA	39	14.80	30.200
2480	1.0	GFSK	ePA	78	14.63	29.040

Table 9-49
Bluetooth Reduced Average RF Power During Conditions with 5/6 GHz WLAN and/or 5G NR – Antenna 2

Frequency [MHz]	Data Rate [Mbps]	Mod.	Power Scheme	Channel No.	Avg Conducted Power	
					[dBm]	[mW]
2402	1.0	GFSK	ePA	0	11.96	15.704
2441	1.0	GFSK	ePA	39	12.72	18.707
2480	1.0	GFSK	ePA	78	11.00	12.589

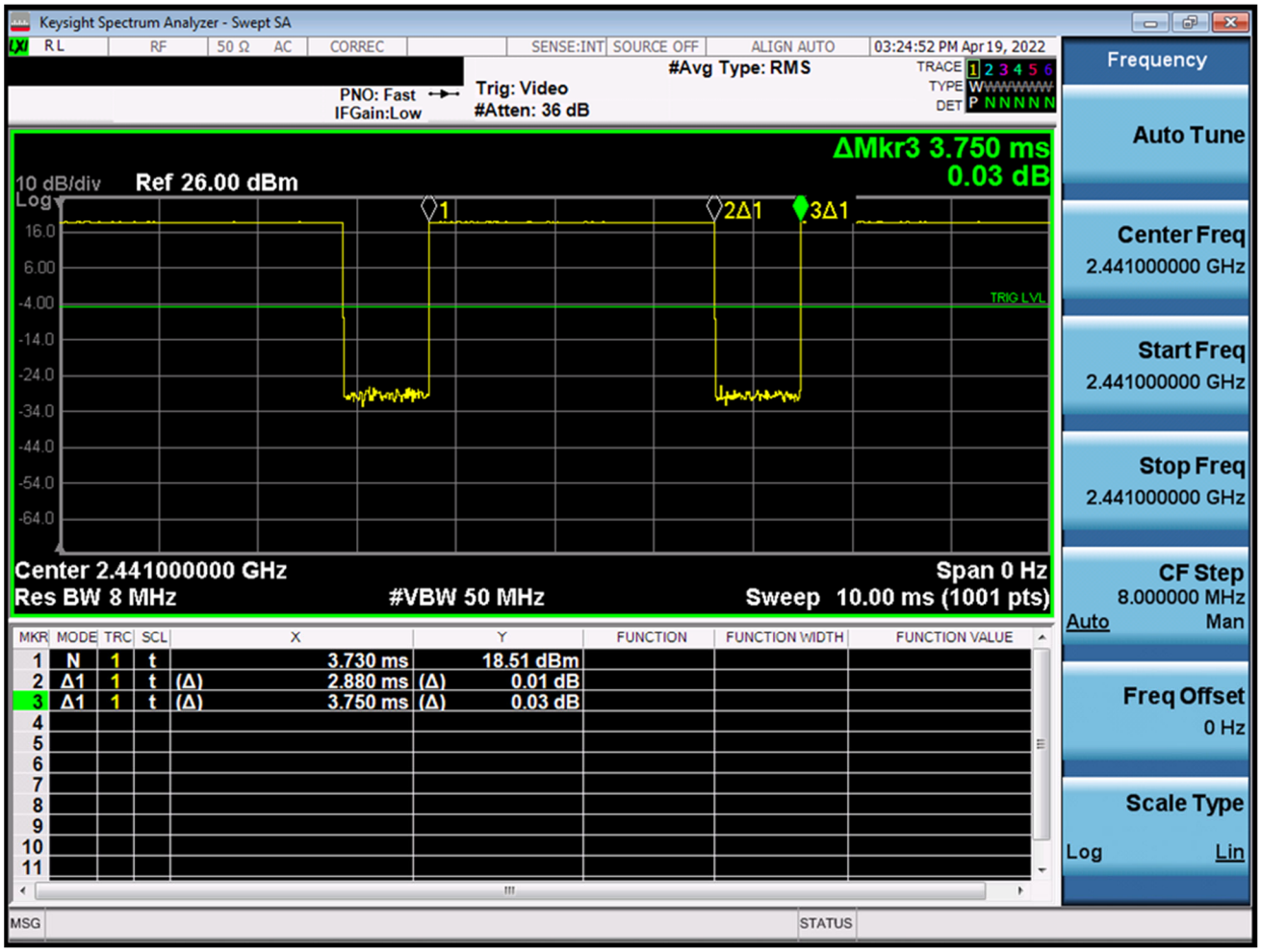

Figure 9-7
Bluetooth Antenna 1 Transmission Plot

Equation 9-1
Bluetooth Antenna 1 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.880ms}{3.750ms} * 100\% = 76.80\%$$

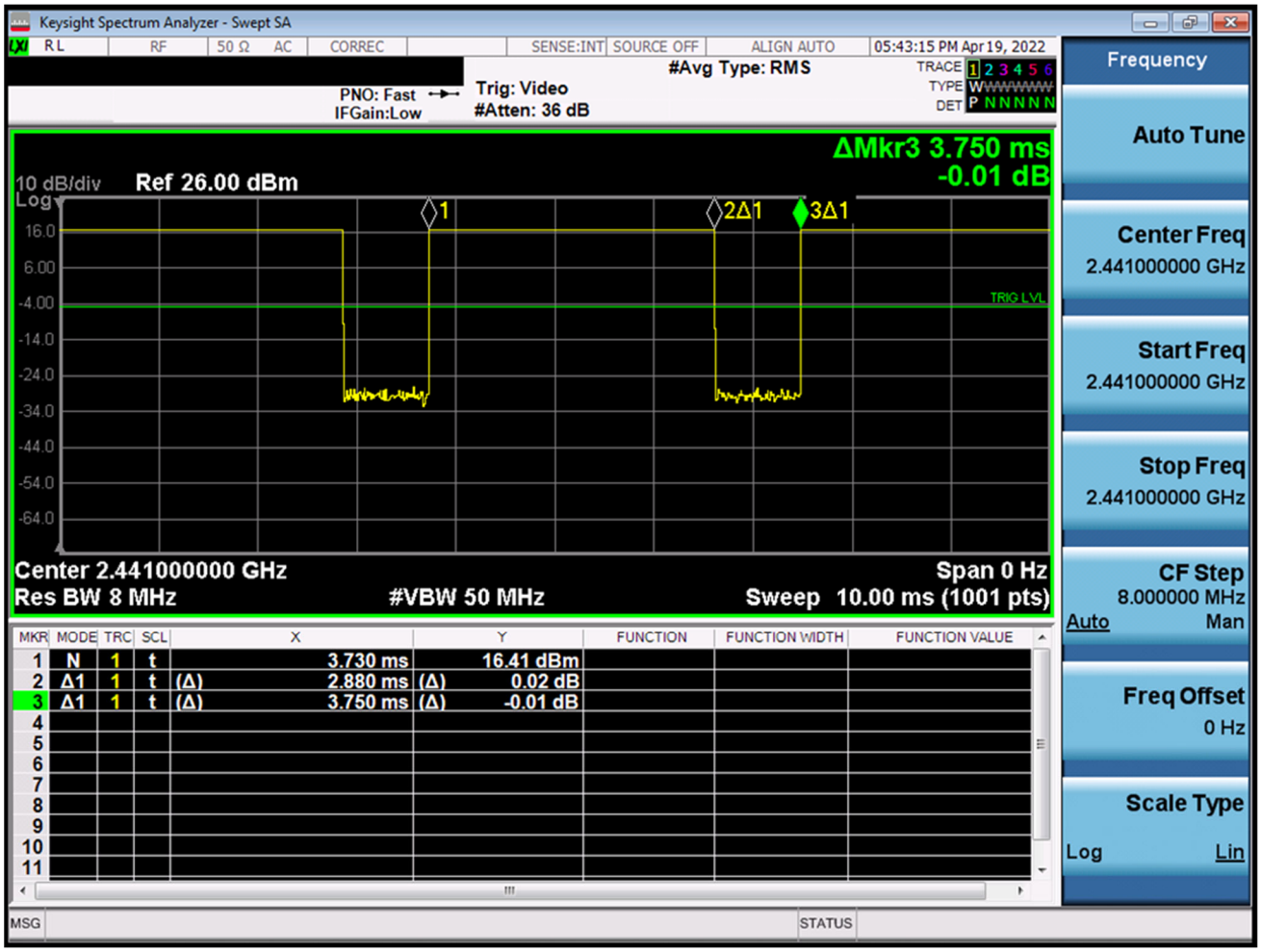

Figure 9-8
Bluetooth Antenna 2 Transmission Plot

Equation 9-2
Bluetooth Antenna 2 Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.880ms}{3.750ms} * 100\% = 76.80\%$$

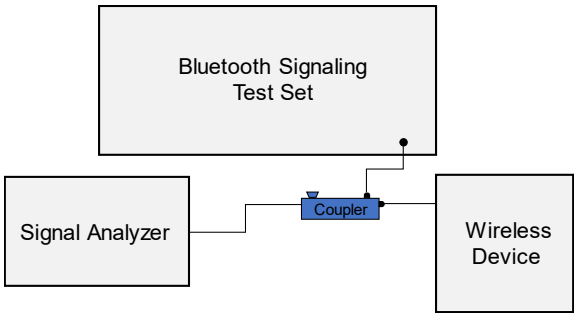

Figure 9-9
Power Measurement Setup

10 SYSTEM VERIFICATION

10.1 Tissue Verification

Table 10-1
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
06/09/2022	30 Head	21.5	12	0.762	52.265	0.750	55.000	1.60%	-4.97%
			13	0.762	52.537	0.750	55.000	1.60%	-4.48%
			14	0.762	52.681	0.750	55.000	1.60%	-4.22%
			30	0.764	53.410	0.750	55.000	1.87%	-2.89%
			60	0.769	53.180	0.753	54.325	2.12%	-2.11%
			65	0.771	53.098	0.753	54.213	2.39%	-2.06%
05/16/2022	750 Head	21.7	680	0.899	43.093	0.888	42.305	1.24%	1.86%
			695	0.904	43.054	0.889	42.227	1.69%	1.96%
			700	0.905	43.043	0.889	42.201	1.80%	2.00%
			710	0.909	43.020	0.890	42.149	2.13%	2.07%
			725	0.914	42.978	0.891	42.071	2.58%	2.16%
			750	0.922	42.912	0.894	41.942	3.13%	2.31%
			770	0.929	42.856	0.895	41.838	3.80%	2.43%
			785	0.934	42.819	0.896	41.760	4.24%	2.54%
			800	0.939	42.783	0.897	41.682	4.68%	2.64%
06/02/2022	750 Head	22.5	680	0.884	43.722	0.888	42.305	-0.45%	3.35%
			695	0.889	43.675	0.889	42.227	0.00%	3.43%
			700	0.891	43.658	0.889	42.201	0.22%	3.45%
			710	0.894	43.623	0.890	42.149	0.45%	3.50%
			725	0.900	43.571	0.891	42.071	1.01%	3.57%
			750	0.909	43.496	0.894	41.942	1.68%	3.71%
			770	0.916	43.438	0.895	41.838	2.35%	3.82%
			785	0.921	43.388	0.896	41.760	2.79%	3.90%
			800	0.927	43.329	0.897	41.682	3.34%	3.95%
05/17/2022	835 Head	21.4	815	0.937	42.427	0.898	41.594	4.34%	2.00%
			820	0.938	42.414	0.899	41.578	4.34%	2.01%
			835	0.944	42.377	0.900	41.500	4.89%	2.11%
			850	0.950	42.348	0.916	41.500	3.71%	2.04%
05/22/2022	835 Head	21.3	815	0.924	41.002	0.898	41.594	2.90%	-1.42%
			820	0.926	40.989	0.899	41.578	3.00%	-1.42%
			835	0.931	40.952	0.900	41.500	3.44%	-1.32%
			850	0.937	40.925	0.916	41.500	2.29%	-1.39%
06/02/2022	835 Head	22.5	815	0.933	43.273	0.898	41.594	3.90%	4.04%
			820	0.935	43.257	0.899	41.578	4.00%	4.04%
			835	0.940	43.222	0.900	41.500	4.44%	4.15%
			850	0.946	43.195	0.916	41.500	3.28%	4.08%
05/31/2022	1750 Head	20.4	1710	1.332	38.670	1.348	40.142	-1.19%	-3.67%
			1720	1.337	38.653	1.354	40.126	-1.26%	-3.67%
			1745	1.352	38.601	1.368	40.087	-1.17%	-3.71%
			1750	1.355	38.589	1.371	40.079	-1.17%	-3.72%
			1770	1.367	38.552	1.383	40.047	-1.16%	-3.73%
			1790	1.379	38.519	1.394	40.016	-1.08%	-3.74%
06/04/2022	1750 Head	21.4	1710	1.336	41.362	1.348	40.142	-0.89%	3.04%
			1720	1.342	41.340	1.354	40.126	-0.89%	3.03%
			1745	1.353	41.263	1.368	40.087	-1.10%	2.93%
			1750	1.355	41.252	1.371	40.079	-1.17%	2.93%
			1770	1.367	41.220	1.383	40.047	-1.16%	2.93%
			1790	1.381	41.213	1.394	40.016	-0.93%	2.99%
05/29/2022	1900 Head	20.5	1850	1.427	38.258	1.400	40.000	1.93%	-4.35%
			1860	1.433	38.240	1.400	40.000	2.36%	-4.40%
			1880	1.446	38.214	1.400	40.000	3.29%	-4.47%
			1900	1.458	38.205	1.400	40.000	4.14%	-4.49%
			1905	1.462	38.203	1.400	40.000	4.43%	-4.49%
			1910	1.464	38.201	1.400	40.000	4.57%	-4.50%
06/02/2022	1900 Head	21.8	1850	1.392	38.860	1.400	40.000	-0.57%	-2.85%
			1860	1.402	38.817	1.400	40.000	0.14%	-2.96%
			1880	1.422	38.729	1.400	40.000	1.57%	-3.18%
			1900	1.443	38.638	1.400	40.000	3.07%	-3.41%
			1905	1.448	38.615	1.400	40.000	3.43%	-3.46%
			1910	1.453	38.593	1.400	40.000	3.79%	-3.52%

Table 10-2
Measured Head Tissue Properties (Cont.)

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
05/16/2022	2450 Head	21.0	2300	1.724	40.739	1.670	39.500	3.23%	3.14%
			2310	1.732	40.721	1.679	39.480	3.16%	3.14%
			2320	1.740	40.704	1.687	39.460	3.14%	3.15%
			2400	1.802	40.579	1.756	39.289	2.62%	3.28%
			2450	1.844	40.505	1.800	39.200	2.44%	3.33%
			2480	1.869	40.462	1.833	39.162	1.96%	3.32%
			2500	1.884	40.429	1.855	39.136	1.56%	3.30%
			2510	1.892	40.411	1.866	39.123	1.39%	3.29%
			2535	1.914	40.361	1.893	39.092	1.11%	3.25%
			2550	1.928	40.334	1.909	39.073	1.00%	3.23%
			2560	1.937	40.323	1.920	39.060	0.89%	3.23%
			2600	1.970	40.271	1.964	39.009	0.31%	3.24%
			2650	2.013	40.183	2.018	38.945	-0.25%	3.18%
			2680	2.040	40.133	2.051	38.907	-0.54%	3.15%
			2700	2.057	40.099	2.073	38.882	-0.77%	3.13%
05/18/2022	2450 Head	20.5	2300	1.736	40.399	1.670	39.500	3.95%	2.28%
			2310	1.744	40.387	1.679	39.480	3.87%	2.30%
			2320	1.752	40.377	1.687	39.460	3.85%	2.32%
			2400	1.816	40.246	1.756	39.289	3.42%	2.44%
			2450	1.860	40.169	1.800	39.200	3.33%	2.47%
			2480	1.884	40.128	1.833	39.162	2.78%	2.47%
			2500	1.900	40.094	1.855	39.136	2.43%	2.45%
			2510	1.909	40.077	1.866	39.123	2.30%	2.44%
			2535	1.931	40.026	1.893	39.092	2.01%	2.39%
			2550	1.946	39.999	1.909	39.073	1.94%	2.37%
			2560	1.954	39.986	1.920	39.060	1.77%	2.37%
			2600	1.985	39.933	1.964	39.009	1.07%	2.37%
			2650	2.029	39.842	2.018	38.945	0.55%	2.30%
			2680	2.055	39.796	2.051	38.907	0.20%	2.28%
			2700	2.072	39.767	2.073	38.882	-0.05%	2.28%
05/30/2022	2450 Head	23.0	2300	1.705	39.623	1.670	39.500	2.10%	0.31%
			2310	1.716	39.589	1.679	39.480	2.20%	0.28%
			2320	1.728	39.550	1.687	39.460	2.43%	0.23%
			2400	1.815	39.270	1.756	39.289	3.36%	-0.05%
			2450	1.870	39.073	1.800	39.200	3.89%	-0.32%
			2480	1.902	38.978	1.833	39.162	3.76%	-0.47%
			2500	1.924	38.904	1.855	39.136	3.72%	-0.59%
			2510	1.935	38.864	1.866	39.123	3.70%	-0.66%
			2535	1.963	38.763	1.893	39.092	3.70%	-0.84%
			2550	1.980	38.708	1.909	39.073	3.72%	-0.93%
			2560	1.991	38.674	1.920	39.060	3.70%	-0.99%
			2600	2.034	38.533	1.964	39.009	3.56%	-1.22%
			2650	2.088	38.347	2.018	38.945	3.47%	-1.54%
			2680	2.123	38.240	2.051	38.907	3.51%	-1.71%
			2700	2.144	38.177	2.073	38.882	3.42%	-1.81%
06/14/2022	2450 Head	22.8	2300	1.701	39.642	1.670	39.500	1.86%	0.36%
			2310	1.712	39.602	1.679	39.480	1.97%	0.31%
			2320	1.723	39.561	1.687	39.460	2.13%	0.26%
			2400	1.806	39.294	1.756	39.289	2.85%	0.01%
			2450	1.862	39.120	1.800	39.200	3.44%	-0.20%
			2480	1.893	39.009	1.833	39.162	3.27%	-0.39%
			2500	1.914	38.929	1.855	39.136	3.18%	-0.53%
			2510	1.925	38.894	1.866	39.123	3.16%	-0.59%
			2535	1.953	38.808	1.893	39.092	3.17%	-0.73%
			2550	1.969	38.754	1.909	39.073	3.14%	-0.82%
			2560	1.980	38.718	1.920	39.060	3.13%	-0.88%
			2600	2.022	38.561	1.964	39.009	2.95%	-1.15%
			2650	2.076	38.373	2.018	38.945	2.87%	-1.47%
			2680	2.107	38.261	2.051	38.907	2.73%	-1.66%
			2700	2.128	38.190	2.073	38.882	2.65%	-1.78%

Table 10-3
Measured Head Tissue Properties (Cont.)

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
06/16/2022	3600 Head	21.6	3300	2.583	37.907	2.708	38.157	-4.62%	-0.66%
			3350	2.634	37.837	2.759	38.100	-4.53%	-0.69%
			3450	2.729	37.660	2.861	37.986	-4.61%	-0.86%
			3500	2.780	37.586	2.913	37.929	-4.57%	-0.90%
			3550	2.827	37.520	2.964	37.871	-4.62%	-0.93%
			3560	2.837	37.503	2.974	37.860	-4.61%	-0.94%
			3600	2.877	37.449	3.015	37.814	-4.58%	-0.97%
			3650	2.922	37.379	3.066	37.757	-4.70%	-1.00%
			3690	2.959	37.304	3.107	37.711	-4.76%	-1.08%
			3700	2.969	37.297	3.117	37.700	-4.75%	-1.07%
			3750	3.016	37.218	3.169	37.643	-4.83%	-1.13%
			3900	3.160	36.957	3.323	37.471	-4.91%	-1.37%
			3930	3.191	36.876	3.353	37.437	-4.83%	-1.50%
			4100	3.366	36.569	3.528	37.243	-4.59%	-1.81%
			4150	3.420	36.501	3.579	37.186	-4.44%	-1.84%
05/19/2022	5200-5800 Head	22.2	5180	4.558	35.629	4.635	36.009	-1.66%	-1.06%
			5190	4.568	35.603	4.645	35.998	-1.66%	-1.10%
			5200	4.582	35.575	4.655	35.986	-1.57%	-1.14%
			5210	4.595	35.562	4.666	35.975	-1.52%	-1.15%
			5220	4.606	35.532	4.676	35.963	-1.50%	-1.20%
			5240	4.631	35.507	4.696	35.940	-1.38%	-1.20%
			5250	4.643	35.498	4.706	35.929	-1.34%	-1.20%
			5260	4.655	35.487	4.717	35.917	-1.31%	-1.20%
			5270	4.669	35.464	4.727	35.906	-1.23%	-1.23%
			5280	4.683	35.445	4.737	35.894	-1.14%	-1.25%
			5290	4.694	35.429	4.748	35.883	-1.14%	-1.27%
			5300	4.703	35.419	4.758	35.871	-1.16%	-1.26%
			5310	4.708	35.407	4.768	35.860	-1.26%	-1.26%
			5320	4.716	35.389	4.778	35.849	-1.30%	-1.28%
			5500	4.939	35.105	4.963	35.643	-0.48%	-1.51%
			5510	4.952	35.103	4.973	35.632	-0.42%	-1.48%
			5520	4.963	35.101	4.983	35.620	-0.40%	-1.46%
			5530	4.970	35.099	4.994	35.609	-0.48%	-1.43%
			5540	4.976	35.082	5.004	35.597	-0.56%	-1.45%
			5550	4.982	35.058	5.014	35.586	-0.64%	-1.48%
			5560	4.994	35.032	5.024	35.574	-0.60%	-1.52%
			5580	5.026	34.984	5.045	35.551	-0.38%	-1.59%
			5600	5.056	34.949	5.065	35.529	-0.18%	-1.63%
			5610	5.071	34.948	5.076	35.518	-0.10%	-1.60%
			5620	5.081	34.945	5.086	35.506	-0.10%	-1.58%
			5640	5.098	34.922	5.106	35.483	-0.16%	-1.58%
			5660	5.112	34.883	5.127	35.460	-0.29%	-1.63%
			5670	5.121	34.854	5.137	35.449	-0.31%	-1.68%
			5680	5.135	34.830	5.147	35.437	-0.23%	-1.71%
			5690	5.150	34.809	5.158	35.426	-0.16%	-1.74%
			5700	5.165	34.792	5.168	35.414	-0.06%	-1.76%
			5710	5.179	34.772	5.178	35.403	0.02%	-1.78%
			5720	5.192	34.759	5.188	35.391	0.08%	-1.79%
			5745	5.213	34.727	5.214	35.363	-0.02%	-1.80%
			5750	5.217	34.718	5.219	35.357	-0.04%	-1.81%
			5755	5.222	34.708	5.224	35.351	-0.04%	-1.82%
			5765	5.233	34.684	5.234	35.340	-0.02%	-1.86%
			5775	5.247	34.661	5.245	35.329	0.04%	-1.89%
			5785	5.261	34.636	5.255	35.317	0.11%	-1.93%
			5795	5.274	34.616	5.265	35.305	0.17%	-1.95%
			5805	5.285	34.589	5.275	35.294	0.19%	-2.00%
			5825	5.311	34.542	5.296	35.271	0.28%	-2.07%
			5835	5.323	34.536	5.305	35.230	0.34%	-1.97%
			5845	5.331	34.529	5.315	35.210	0.30%	-1.93%
			5855	5.336	34.512	5.325	35.197	0.21%	-1.95%
			5875	5.355	34.451	5.347	35.183	0.15%	-2.08%
			5885	5.367	34.426	5.357	35.177	0.19%	-2.13%
			5905	5.391	34.377	5.379	35.163	0.22%	-2.24%

Table 10-4
Measured Body 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
05/16/2022	750 Body	20.9	680	0.937	54.646	0.958	55.804	-2.19%	-2.08%
			695	0.943	54.622	0.959	55.745	-1.67%	-2.01%
			700	0.944	54.612	0.959	55.726	-1.56%	-2.00%
			710	0.948	54.592	0.960	55.687	-1.25%	-1.97%
			725	0.953	54.554	0.961	55.629	-0.83%	-1.93%
			750	0.963	54.494	0.964	55.531	-0.10%	-1.87%
			770	0.971	54.459	0.965	55.453	0.62%	-1.79%
			785	0.976	54.433	0.966	55.395	1.04%	-1.74%
			800	0.981	54.401	0.967	55.336	1.45%	-1.69%
05/19/2022	750 Body	20.7	680	0.943	54.128	0.958	55.804	-1.57%	-3.00%
			695	0.948	54.105	0.959	55.745	-1.15%	-2.94%
			700	0.949	54.097	0.959	55.726	-1.04%	-2.92%
			710	0.953	54.083	0.960	55.687	-0.73%	-2.88%
			725	0.958	54.050	0.961	55.629	-0.31%	-2.84%
			750	0.967	54.016	0.964	55.531	0.31%	-2.73%
			770	0.975	53.993	0.965	55.453	1.04%	-2.63%
			785	0.981	53.969	0.966	55.395	1.55%	-2.57%
			800	0.987	53.937	0.967	55.336	2.07%	-2.53%
05/24/2022	750 Body	20.5	680	0.948	54.013	0.958	55.804	-1.04%	-3.21%
			695	0.952	53.987	0.959	55.745	-0.73%	-3.15%
			700	0.954	53.979	0.959	55.726	-0.52%	-3.13%
			710	0.958	53.961	0.960	55.687	-0.21%	-3.10%
			725	0.964	53.921	0.961	55.629	0.31%	-3.07%
			750	0.974	53.855	0.964	55.531	1.04%	-3.02%
			770	0.981	53.799	0.965	55.453	1.66%	-2.98%
			785	0.987	53.765	0.966	55.395	2.17%	-2.94%
			800	0.993	53.734	0.967	55.336	2.69%	-2.90%
06/16/2022	750 Body	21.7	680	0.950	53.560	0.958	55.804	-0.84%	-4.02%
			695	0.955	53.515	0.959	55.745	-0.42%	-4.00%
			700	0.957	53.501	0.959	55.726	-0.21%	-3.99%
			710	0.960	53.470	0.960	55.687	0.00%	-3.98%
			725	0.966	53.427	0.961	55.629	0.52%	-3.96%
			750	0.975	53.364	0.964	55.531	1.14%	-3.90%
			770	0.981	53.321	0.965	55.453	1.66%	-3.84%
			785	0.986	53.296	0.966	55.395	2.07%	-3.79%
			800	0.992	53.264	0.967	55.336	2.59%	-3.74%
06/19/2022	750 Body	21.7	680	0.952	53.521	0.958	55.804	-0.63%	-4.09%
			695	0.957	53.473	0.959	55.745	-0.21%	-4.08%
			700	0.958	53.459	0.959	55.726	-0.10%	-4.07%
			710	0.962	53.430	0.960	55.687	0.21%	-4.05%
			725	0.967	53.386	0.961	55.629	0.62%	-4.03%
			750	0.977	53.326	0.964	55.531	1.35%	-3.97%
			770	0.984	53.267	0.965	55.453	1.97%	-3.94%
			785	0.990	53.221	0.966	55.395	2.48%	-3.92%
			800	0.995	53.181	0.967	55.336	2.90%	-3.89%
05/11/2022	835 Body	21.2	815	0.950	53.756	0.968	55.271	-1.86%	-2.74%
			820	0.955	53.701	0.969	55.258	-1.44%	-2.82%
			835	0.971	53.540	0.970	55.200	0.10%	-3.01%
			850	0.988	53.380	0.988	55.154	0.00%	-3.22%
05/11/2022	835 Body	20.3	815	0.998	54.767	0.968	55.271	3.10%	-0.91%
			820	1.000	54.751	0.969	55.258	3.20%	-0.92%
			835	1.006	54.715	0.970	55.200	3.71%	-0.88%
			850	1.013	54.684	0.988	55.154	2.53%	-0.85%
05/12/2022	835 Body	22.7	815	0.942	53.399	0.968	55.271	-2.69%	-3.39%
			820	0.947	53.347	0.969	55.258	-2.27%	-3.46%
			835	0.963	53.190	0.970	55.200	-0.72%	-3.64%
			850	0.979	53.041	0.988	55.154	-0.91%	-3.83%
05/22/2022	835 Body	20.4	815	0.992	53.241	0.968	55.271	2.48%	-3.67%
			820	0.994	53.227	0.969	55.258	2.58%	-3.68%
			835	1.000	53.189	0.970	55.200	3.09%	-3.64%
			850	1.006	53.162	0.988	55.154	1.82%	-3.61%
05/26/2022	835 Body	21.4	815	0.992	55.519	0.968	55.271	2.48%	0.45%
			820	0.997	55.465	0.969	55.258	2.89%	0.37%
			835	1.013	55.307	0.970	55.200	4.43%	0.19%
			850	1.028	55.169	0.988	55.154	4.05%	0.03%
06/16/2022	835 Body	20.6	815	0.953	55.455	0.968	55.271	-1.55%	0.33%
			820	0.954	55.443	0.969	55.258	-1.55%	0.33%
			835	0.960	55.419	0.970	55.200	-1.03%	0.40%
			850	0.966	55.402	0.988	55.154	-2.23%	0.45%

Table 10-5
Measured Body Tissue Properties (Cont.)

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
05/18/2022	1750 Body	21.4	1710	1.501	51.699	1.463	53.537	2.60%	-3.43%
			1720	1.508	51.688	1.469	53.511	2.65%	-3.41%
			1745	1.525	51.662	1.485	53.445	2.69%	-3.34%
			1750	1.528	51.657	1.488	53.432	2.69%	-3.32%
			1770	1.542	51.627	1.501	53.379	2.73%	-3.28%
			1790	1.556	51.586	1.514	53.326	2.77%	-3.26%
05/20/2022	1750 Body	21.0	1710	1.504	51.846	1.463	53.537	2.80%	-3.16%
			1720	1.512	51.841	1.469	53.511	2.93%	-3.12%
			1745	1.530	51.829	1.485	53.445	3.03%	-3.02%
			1750	1.533	51.822	1.488	53.432	3.02%	-3.01%
			1770	1.546	51.766	1.501	53.379	3.00%	-3.02%
			1790	1.560	51.704	1.514	53.326	3.04%	-3.04%
05/20/2022	1750 Body	21.6	1710	1.438	52.244	1.463	53.537	-1.71%	-2.42%
			1720	1.444	52.237	1.469	53.511	-1.70%	-2.38%
			1745	1.460	52.231	1.485	53.445	-1.68%	-2.27%
			1750	1.464	52.230	1.488	53.432	-1.61%	-2.25%
			1770	1.477	52.223	1.501	53.379	-1.60%	-2.17%
			1790	1.491	52.211	1.514	53.326	-1.52%	-2.09%
05/22/2022	1750 Body	21.1	1710	1.512	51.606	1.463	53.537	3.35%	-3.61%
			1720	1.519	51.592	1.469	53.511	3.40%	-3.59%
			1745	1.538	51.559	1.485	53.445	3.57%	-3.53%
			1750	1.541	51.551	1.488	53.432	3.56%	-3.52%
			1770	1.556	51.505	1.501	53.379	3.66%	-3.51%
			1790	1.570	51.447	1.514	53.326	3.70%	-3.52%
05/24/2022	1750 Body	20.4	1710	1.455	53.315	1.463	53.537	-0.55%	-0.41%
			1720	1.462	53.294	1.469	53.511	-0.48%	-0.41%
			1745	1.479	53.243	1.485	53.445	-0.40%	-0.36%
			1750	1.482	53.233	1.488	53.432	-0.40%	-0.37%
			1770	1.496	53.211	1.501	53.379	-0.33%	-0.31%
			1790	1.510	53.193	1.514	53.326	-0.26%	-0.25%
05/26/2022	1750 Body	19.9	1710	1.450	52.813	1.463	53.537	-0.89%	-1.35%
			1720	1.456	52.788	1.469	53.511	-0.88%	-1.35%
			1745	1.474	52.723	1.485	53.445	-0.74%	-1.35%
			1750	1.478	52.712	1.488	53.432	-0.67%	-1.35%
			1770	1.492	52.704	1.501	53.379	-0.60%	-1.26%
05/30/2022	1750 Body	20.4	1710	1.455	52.150	1.463	53.537	-0.55%	-2.59%
			1720	1.462	52.123	1.469	53.511	-0.48%	-2.59%
			1745	1.480	52.067	1.485	53.445	-0.34%	-2.58%
			1750	1.483	52.060	1.488	53.432	-0.34%	-2.57%
			1770	1.495	52.041	1.501	53.379	-0.40%	-2.51%
			1790	1.509	52.026	1.514	53.326	-0.33%	-2.44%
07/11/2022	1750 Body	20.5	1710	1.495	51.438	1.463	53.537	2.19%	-3.92%
			1720	1.507	51.396	1.469	53.511	2.59%	-3.95%
			1745	1.535	51.294	1.485	53.445	3.37%	-4.02%
			1750	1.540	51.272	1.488	53.432	3.49%	-4.04%
			1770	1.562	51.183	1.501	53.379	4.06%	-4.11%
			1790	1.583	51.085	1.514	53.326	4.56%	-4.20%
05/08/2022	1900 Body	20.9	1850	1.512	52.213	1.520	53.300	-0.53%	-2.04%
			1860	1.523	52.178	1.520	53.300	0.20%	-2.11%
			1880	1.546	52.102	1.520	53.300	1.71%	-2.25%
			1900	1.569	52.017	1.520	53.300	3.22%	-2.41%
			1905	1.575	51.995	1.520	53.300	3.62%	-2.45%
			1910	1.581	51.973	1.520	53.300	4.01%	-2.49%
05/10/2022	1900 Body	22.2	1850	1.513	52.190	1.520	53.300	-0.46%	-2.08%
			1860	1.524	52.153	1.520	53.300	0.26%	-2.15%
			1880	1.547	52.081	1.520	53.300	1.78%	-2.29%
			1900	1.571	52.006	1.520	53.300	3.36%	-2.43%
			1905	1.577	51.985	1.520	53.300	3.75%	-2.47%
			1910	1.583	51.962	1.520	53.300	4.14%	-2.51%
05/16/2022	1900 Body	22.5	1850	1.515	51.071	1.520	53.300	-0.35%	-4.18%
			1860	1.526	51.036	1.520	53.300	0.38%	-4.25%
			1880	1.549	50.968	1.520	53.300	1.88%	-4.38%
			1900	1.572	50.898	1.520	53.300	3.40%	-4.51%
			1905	1.578	50.881	1.520	53.300	3.80%	-4.54%
			1910	1.584	50.862	1.520	53.300	4.18%	-4.57%
05/17/2022	1900 Body	22.7	1850	1.511	51.617	1.520	53.300	-0.59%	-3.16%
			1860	1.522	51.585	1.520	53.300	0.13%	-3.22%
			1880	1.544	51.524	1.520	53.300	1.58%	-3.33%
			1900	1.565	51.461	1.520	53.300	2.96%	-3.45%
			1905	1.571	51.443	1.520	53.300	3.36%	-3.48%
			1910	1.576	51.425	1.520	53.300	3.68%	-3.52%
05/19/2022	1900 Body	23.7	1850	1.514	51.356	1.520	53.300	-0.39%	-3.65%
			1860	1.525	51.321	1.520	53.300	0.33%	-3.71%
			1880	1.546	51.260	1.520	53.300	1.71%	-3.83%
			1900	1.567	51.194	1.520	53.300	3.09%	-3.95%
			1905	1.572	51.175	1.520	53.300	3.42%	-3.99%
			1910	1.577	51.153	1.520	53.300	3.75%	-4.03%
05/23/2022	1900 Body	24.0	1850	1.510	52.116	1.520	53.300	-0.66%	-2.22%
			1860	1.521	52.081	1.520	53.300	0.07%	-2.29%
			1880	1.546	52.029	1.520	53.300	1.71%	-2.38%
			1900	1.571	51.976	1.520	53.300	3.36%	-2.48%
			1905	1.577	51.957	1.520	53.300	3.75%	-2.52%
			1910	1.583	51.938	1.520	53.300	4.14%	-2.56%
06/13/2022	1900 Body	21.0	1850	1.517	52.338	1.520	53.300	-0.20%	-1.80%
			1860	1.527	52.302	1.520	53.300	0.46%	-1.87%
			1880	1.548	52.230	1.520	53.300	1.84%	-2.01%
			1900	1.571	52.156	1.520	53.300	3.36%	-2.15%
			1905	1.576	52.139	1.520	53.300	3.68%	-2.18%
			1910	1.581	52.121	1.520	53.300	4.01%	-2.21%
07/05/2022	1900 Body	20.8	1850	1.498	52.113	1.520	53.300	-1.45%	-2.23%
			1860	1.509	52.084	1.520	53.300	-0.72%	-2.28%
			1880	1.528	52.008	1.520	53.300	0.53%	-2.42%
			1900	1.547	51.920	1.520	53.300	1.78%	-2.59%
			1905	1.552	51.901	1.520	53.300	2.11%	-2.62%
			1910	1.557	51.881	1.520	53.300	2.43%	-2.66%

Table 10-6
Measured Body Tissue Properties (Cont.)

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
05/18/2022	2450 Body	22.6	2300	1.817	52.389	1.809	52.900	0.44%	-0.97%
			2310	1.831	52.354	1.816	52.887	0.83%	-1.01%
			2320	1.846	52.323	1.826	52.873	1.10%	-1.04%
			2400	1.955	52.001	1.902	52.767	2.79%	-1.45%
			2450	2.020	51.813	1.950	52.700	3.59%	-1.68%
			2480	2.059	51.686	1.993	52.662	3.31%	-1.85%
			2500	2.088	51.609	2.021	52.636	3.32%	-1.95%
			2510	2.103	51.573	2.035	52.623	3.34%	-2.00%
			2535	2.139	51.490	2.071	52.592	3.28%	-2.10%
			2550	2.160	51.432	2.092	52.573	3.25%	-2.17%
			2560	2.174	51.392	2.106	52.560	3.23%	-2.22%
			2600	2.231	51.218	2.163	52.509	3.14%	-2.46%
			2650	2.302	51.030	2.234	52.445	3.04%	-2.70%
			2680	2.344	50.884	2.277	52.407	2.94%	-2.91%
			2700	2.374	50.808	2.305	52.382	2.99%	-3.00%
05/19/2022	2450 Body	22.4	2300	1.839	51.984	1.809	52.900	1.66%	-1.73%
			2310	1.850	51.952	1.816	52.887	1.87%	-1.77%
			2320	1.861	51.914	1.826	52.873	1.92%	-1.81%
			2400	1.953	51.682	1.902	52.767	2.68%	-2.06%
			2450	2.010	51.563	1.950	52.700	3.08%	-2.16%
			2480	2.043	51.459	1.993	52.662	2.51%	-2.28%
			2500	2.067	51.390	2.021	52.636	2.28%	-2.37%
			2510	2.079	51.361	2.035	52.623	2.16%	-2.40%
			2535	2.110	51.301	2.071	52.592	1.88%	-2.45%
			2550	2.128	51.273	2.092	52.573	1.72%	-2.47%
			2560	2.140	51.251	2.106	52.560	1.61%	-2.49%
			2600	2.183	51.129	2.163	52.509	0.92%	-2.63%
			2650	2.246	50.972	2.234	52.445	0.54%	-2.81%
			2680	2.282	50.908	2.277	52.407	0.22%	-2.86%
			2700	2.305	50.853	2.305	52.382	0.00%	-2.92%
05/21/2022	2450 Body	21.2	2300	1.839	52.462	1.809	52.900	1.66%	-0.83%
			2310	1.851	52.431	1.816	52.887	1.93%	-0.86%
			2320	1.863	52.404	1.826	52.873	2.03%	-0.89%
			2400	1.948	52.214	1.902	52.767	2.42%	-1.05%
			2450	2.005	52.084	1.950	52.700	2.82%	-1.17%
			2480	2.038	52.009	1.993	52.662	2.26%	-1.24%
			2500	2.061	51.957	2.021	52.636	1.98%	-1.29%
			2510	2.072	51.928	2.035	52.623	1.82%	-1.32%
			2535	2.102	51.854	2.071	52.592	1.50%	-1.40%
			2550	2.120	51.817	2.092	52.573	1.34%	-1.44%
			2560	2.132	51.794	2.106	52.560	1.23%	-1.46%
			2600	2.176	51.688	2.163	52.509	0.60%	-1.56%
			2650	2.236	51.542	2.234	52.445	0.09%	-1.72%
			2680	2.271	51.462	2.277	52.407	-0.26%	-1.80%
			2700	2.293	51.407	2.305	52.382	-0.52%	-1.86%
05/25/2022	2450 Body	23.1	2300	1.851	50.666	1.809	52.900	2.32%	-4.22%
			2310	1.860	50.655	1.816	52.887	2.42%	-4.22%
			2320	1.869	50.646	1.826	52.873	2.35%	-4.21%
			2400	1.941	50.602	1.902	52.767	2.05%	-4.10%
			2450	1.989	50.568	1.950	52.700	2.00%	-4.05%
			2480	2.016	50.542	1.993	52.662	1.15%	-4.03%
			2500	2.034	50.520	2.021	52.636	0.64%	-4.02%
			2510	2.043	50.511	2.035	52.623	0.39%	-4.01%
			2535	2.068	50.502	2.071	52.592	-0.14%	-3.97%
			2550	2.084	50.493	2.092	52.573	-0.38%	-3.96%
			2560	2.094	50.487	2.106	52.560	-0.57%	-3.94%
			2600	2.130	50.456	2.163	52.509	-1.53%	-3.91%
			2650	2.180	50.394	2.234	52.445	-2.42%	-3.91%
			2680	2.207	50.367	2.277	52.407	-3.07%	-3.89%
			2700	2.226	50.335	2.305	52.382	-3.43%	-3.91%
06/14/2022	2450 Body	23.8	2300	1.774	51.642	1.809	52.900	-1.93%	-2.38%
			2310	1.788	51.597	1.816	52.887	-1.54%	-2.44%
			2320	1.801	51.562	1.826	52.873	-1.37%	-2.48%
			2400	1.903	51.278	1.902	52.767	0.05%	-2.82%
			2450	1.973	51.127	1.950	52.700	1.18%	-2.98%
			2480	2.010	50.999	1.993	52.662	0.85%	-3.16%
			2500	2.037	50.911	2.021	52.636	0.79%	-3.28%
			2510	2.053	50.878	2.035	52.623	0.88%	-3.32%
			2535	2.089	50.809	2.071	52.592	0.87%	-3.39%
			2550	2.108	50.754	2.092	52.573	0.76%	-3.46%
			2560	2.120	50.710	2.106	52.560	0.66%	-3.52%
			2600	2.173	50.528	2.163	52.509	0.46%	-3.77%
			2650	2.241	50.367	2.234	52.445	0.31%	-3.96%
			2680	2.276	50.223	2.277	52.407	-0.04%	-4.17%
			2700	2.304	50.140	2.305	52.382	-0.04%	-4.28%

Table 10-7
Measured Body Tissue Properties (Cont.)

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
05/18/2022	3600 Body	21.5	3300	3.168	49.793	3.080	51.593	2.86%	-3.49%
			3350	3.225	49.673	3.139	51.525	2.74%	-3.59%
			3450	3.333	49.521	3.256	51.389	2.36%	-3.64%
			3500	3.377	49.438	3.314	51.321	1.90%	-3.67%
			3550	3.438	49.354	3.372	51.254	1.96%	-3.71%
			3560	3.449	49.316	3.384	51.240	1.92%	-3.75%
			3600	3.484	49.275	3.431	51.186	1.54%	-3.73%
			3650	3.541	49.198	3.489	51.118	1.49%	-3.76%
			3690	3.578	49.129	3.536	51.063	1.19%	-3.79%
			3700	3.591	49.121	3.548	51.050	1.21%	-3.78%
			3750	3.645	49.061	3.606	50.982	1.08%	-3.77%
			3900	3.822	48.822	3.781	50.779	1.08%	-3.85%
			3930	3.854	48.782	3.816	50.738	1.00%	-3.86%
05/23/2022	3600 Body	22.6	3300	3.171	49.789	3.080	51.593	2.95%	-3.50%
			3350	3.226	49.690	3.139	51.525	2.77%	-3.56%
			3450	3.323	49.537	3.256	51.389	2.06%	-3.60%
			3500	3.373	49.481	3.314	51.321	1.78%	-3.59%
			3550	3.420	49.393	3.372	51.254	1.42%	-3.63%
			3560	3.433	49.380	3.384	51.240	1.45%	-3.63%
			3600	3.472	49.335	3.431	51.186	1.19%	-3.62%
			3650	3.524	49.284	3.489	51.118	1.00%	-3.59%
			3690	3.569	49.206	3.536	51.063	0.93%	-3.64%
			3700	3.578	49.199	3.548	51.050	0.85%	-3.63%
			3750	3.629	49.147	3.606	50.982	0.64%	-3.60%
			3900	3.796	48.944	3.781	50.779	0.40%	-3.61%
			3930	3.831	48.916	3.816	50.738	0.39%	-3.59%
			4100	4.033	48.674	4.015	50.507	0.45%	-3.63%
			4150	4.097	48.602	4.073	50.439	0.59%	-3.64%
05/30/2022	3600 Body	21.6	3300	3.161	51.490	3.080	51.593	2.63%	-0.20%
			3350	3.214	51.424	3.139	51.525	2.39%	-0.20%
			3450	3.316	51.290	3.256	51.389	1.84%	-0.19%
			3500	3.368	51.196	3.314	51.321	1.63%	-0.24%
			3550	3.417	51.134	3.372	51.254	1.33%	-0.23%
			3560	3.427	51.108	3.384	51.240	1.27%	-0.26%
			3600	3.472	51.056	3.431	51.186	1.19%	-0.25%
			3650	3.526	50.976	3.489	51.118	1.06%	-0.28%
			3690	3.564	50.914	3.536	51.063	0.79%	-0.29%
			3700	3.575	50.890	3.548	51.050	0.76%	-0.31%
			3750	3.637	50.834	3.606	50.982	0.86%	-0.29%
			3900	3.813	50.627	3.781	50.779	0.85%	-0.30%
			3930	3.855	50.587	3.816	50.738	1.02%	-0.30%
			4100	4.057	50.350	4.015	50.507	1.05%	-0.31%
			4150	4.119	50.283	4.073	50.439	1.13%	-0.31%
06/01/2022	3600 Body	21.2	3300	3.198	50.432	3.080	51.593	3.83%	-2.25%
			3350	3.257	50.299	3.139	51.525	3.76%	-2.38%
			3450	3.353	50.126	3.256	51.389	2.98%	-2.46%
			3500	3.416	50.068	3.314	51.321	3.08%	-2.44%
			3550	3.459	49.995	3.372	51.254	2.58%	-2.46%
			3560	3.474	49.959	3.384	51.240	2.66%	-2.50%
			3600	3.521	49.930	3.431	51.186	2.62%	-2.45%
			3650	3.573	49.840	3.489	51.118	2.41%	-2.50%
			3690	3.622	49.772	3.536	51.063	2.43%	-2.53%
			3700	3.635	49.748	3.548	51.050	2.45%	-2.55%
			3750	3.683	49.692	3.606	50.982	2.14%	-2.53%
			3900	3.866	49.463	3.781	50.779	2.25%	-2.59%
			3930	3.892	49.450	3.816	50.738	1.99%	-2.54%
06/06/2022	3600 Body	22.7	3300	3.143	49.758	3.080	51.593	2.05%	-3.56%
			3350	3.198	49.668	3.139	51.525	1.88%	-3.60%
			3450	3.298	49.528	3.256	51.389	1.29%	-3.62%
			3500	3.346	49.455	3.314	51.321	0.97%	-3.64%
			3550	3.399	49.393	3.372	51.254	0.80%	-3.63%
			3560	3.409	49.384	3.384	51.240	0.74%	-3.62%
			3600	3.449	49.317	3.431	51.186	0.52%	-3.65%
			3650	3.502	49.251	3.489	51.118	0.37%	-3.65%
			3690	3.544	49.190	3.536	51.063	0.23%	-3.67%
			3700	3.555	49.180	3.548	51.050	0.20%	-3.66%
			3750	3.607	49.115	3.606	50.982	0.03%	-3.66%
			3900	3.772	48.914	3.781	50.779	-0.24%	-3.67%
			3930	3.808	48.881	3.816	50.738	-0.21%	-3.66%
			4100	4.005	48.636	4.015	50.507	-0.25%	-3.70%
			4150	4.068	48.574	4.073	50.439	-0.12%	-3.70%
06/14/2022	3600 Body	21.2	3300	2.996	52.099	3.080	51.593	-2.73%	0.98%
			3350	3.048	52.009	3.139	51.525	-2.90%	0.94%
			3450	3.163	51.816	3.256	51.389	-2.86%	0.83%
			3500	3.225	51.745	3.314	51.321	-2.69%	0.83%
			3550	3.280	51.647	3.372	51.254	-2.73%	0.77%
			3560	3.292	51.621	3.384	51.240	-2.72%	0.74%
			3600	3.343	51.554	3.431	51.186	-2.56%	0.72%
			3650	3.400	51.473	3.489	51.118	-2.55%	0.69%
			3690	3.454	51.399	3.536	51.063	-2.32%	0.66%
			3700	3.467	51.388	3.548	51.050	-2.28%	0.66%
			3750	3.527	51.294	3.606	50.982	-2.19%	0.61%
			3900	3.719	51.044	3.781	50.779	-1.64%	0.52%
			3930	3.758	50.968	3.816	50.738	-1.52%	0.45%
			4100	3.991	50.682	4.015	50.507	-0.60%	0.35%
			4150	4.063	50.561	4.073	50.439	-0.25%	0.24%

Table 10-8
Measured Body Tissue Properties (Cont.)

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
05/09/2022	5200-5800 Body	21.2	5180	5.337	47.428	5.276	49.041	1.16%	-3.29%
			5190	5.353	47.396	5.288	49.028	1.23%	-3.33%
			5200	5.365	47.371	5.299	49.014	1.25%	-3.35%
			5210	5.379	47.341	5.311	49.001	1.28%	-3.39%
			5220	5.394	47.309	5.323	48.987	1.33%	-3.43%
			5240	5.424	47.293	5.346	48.960	1.46%	-3.40%
			5250	5.442	47.280	5.358	48.947	1.57%	-3.41%
			5260	5.460	47.257	5.369	48.933	1.69%	-3.43%
			5270	5.476	47.221	5.381	48.919	1.77%	-3.47%
			5280	5.487	47.199	5.393	48.906	1.74%	-3.49%
			5290	5.499	47.188	5.404	48.892	1.76%	-3.49%
			5300	5.514	47.180	5.416	48.879	1.81%	-3.48%
			5310	5.526	47.162	5.428	48.865	1.81%	-3.49%
			5320	5.540	47.132	5.439	48.851	1.86%	-3.52%
			5500	5.808	46.788	5.650	48.607	2.80%	-3.74%
			5510	5.823	46.777	5.661	48.594	2.86%	-3.74%
			5520	5.838	46.765	5.673	48.580	2.91%	-3.74%
			5530	5.848	46.753	5.685	48.566	2.87%	-3.73%
			5540	5.860	46.733	5.696	48.553	2.88%	-3.75%
			5550	5.872	46.700	5.708	48.539	2.87%	-3.79%
			5560	5.887	46.666	5.720	48.526	2.92%	-3.83%
			5580	5.921	46.616	5.743	48.499	3.10%	-3.88%
			5600	5.956	46.594	5.766	48.471	3.30%	-3.87%
			5610	5.971	46.582	5.778	48.458	3.34%	-3.87%
			5620	5.986	46.574	5.790	48.444	3.39%	-3.86%
			5640	6.013	46.546	5.813	48.417	3.44%	-3.86%
			5660	6.036	46.485	5.837	48.390	3.41%	-3.94%
			5670	6.048	46.461	5.848	48.376	3.42%	-3.96%
			5680	6.066	46.437	5.860	48.363	3.52%	-3.98%
			5690	6.083	46.415	5.872	48.349	3.59%	-4.00%
			5700	6.100	46.398	5.883	48.336	3.69%	-4.01%
			5710	6.115	46.388	5.895	48.322	3.73%	-4.00%
			5720	6.131	46.378	5.907	48.309	3.79%	-4.00%
			5745	6.162	46.318	5.936	48.275	3.81%	-4.05%
			5750	6.168	46.309	5.942	48.268	3.80%	-4.06%
			5755	6.175	46.302	5.947	48.261	3.83%	-4.06%
			5765	6.189	46.278	5.959	48.248	3.86%	-4.08%
			5775	6.205	46.248	5.971	48.234	3.92%	-4.12%
			5785	6.221	46.229	5.982	48.220	4.00%	-4.13%
			5795	6.237	46.214	5.994	48.207	4.05%	-4.13%
			5800	6.245	46.206	6.000	48.200	4.08%	-4.14%
			5805	6.253	46.197	6.006	48.193	4.11%	-4.14%
			5825	6.285	46.145	6.029	48.166	4.25%	-4.20%
			5835	6.302	46.120	6.042	48.130	4.30%	-4.18%
			5845	6.315	46.108	6.054	48.110	4.31%	-4.16%
			5855	6.327	46.084	6.066	48.093	4.30%	-4.18%
			5865	6.337	46.057	6.077	48.080	4.28%	-4.21%
			5875	6.346	46.035	6.088	48.067	4.24%	-4.23%
			5885	6.361	46.005	6.100	48.053	4.28%	-4.26%
			5905	6.396	45.968	6.122	48.027	4.48%	-4.29%
05/16/2022	5200-5800 Body	21.9	5180	5.308	48.209	5.276	49.041	0.61%	-1.70%
			5190	5.321	48.200	5.288	49.028	0.62%	-1.69%
			5200	5.337	48.175	5.299	49.014	0.72%	-1.71%
			5210	5.353	48.148	5.311	49.001	0.79%	-1.74%
			5220	5.365	48.115	5.323	48.987	0.79%	-1.78%
			5240	5.394	48.056	5.346	48.960	0.90%	-1.85%
			5250	5.411	48.048	5.358	48.947	0.99%	-1.84%
			5260	5.431	48.041	5.369	48.933	1.15%	-1.82%
			5270	5.447	48.017	5.381	48.919	1.23%	-1.84%
			5280	5.461	48.003	5.393	48.906	1.26%	-1.85%
			5290	5.472	47.996	5.404	48.892	1.26%	-1.83%
			5300	5.483	47.981	5.416	48.879	1.24%	-1.84%
			5310	5.496	47.955	5.428	48.865	1.25%	-1.86%
			5320	5.510	47.925	5.439	48.851	1.31%	-1.90%
			5500	5.775	47.585	5.650	48.607	2.21%	-2.10%
			5510	5.790	47.575	5.661	48.594	2.28%	-2.10%
			5520	5.804	47.565	5.673	48.580	2.31%	-2.09%
			5530	5.817	47.551	5.685	48.566	2.32%	-2.09%
			5540	5.830	47.528	5.696	48.553	2.35%	-2.11%
			5550	5.841	47.501	5.708	48.539	2.33%	-2.14%
			5560	5.856	47.477	5.720	48.526	2.38%	-2.16%
			5580	5.891	47.431	5.743	48.499	2.58%	-2.20%
			5600	5.922	47.396	5.766	48.471	2.71%	-2.22%
			5610	5.935	47.382	5.778	48.458	2.72%	-2.22%
			5620	5.949	47.366	5.790	48.444	2.75%	-2.23%
			5640	5.979	47.340	5.813	48.417	2.86%	-2.22%
			5660	6.001	47.301	5.837	48.390	2.81%	-2.25%
			5670	6.016	47.275	5.848	48.376	2.87%	-2.28%
			5680	6.032	47.246	5.860	48.363	2.94%	-2.31%
			5690	6.047	47.224	5.872	48.349	2.98%	-2.33%
			5700	6.064	47.204	5.883	48.336	3.08%	-2.34%
			5710	6.078	47.191	5.895	48.322	3.10%	-2.34%
			5720	6.094	47.178	5.907	48.309	3.17%	-2.34%
			5745	6.133	47.133	5.936	48.275	3.32%	-2.37%
			5750	6.138	47.120	5.942	48.268	3.30%	-2.38%
			5755	6.143	47.107	5.947	48.261	3.30%	-2.39%
			5765	6.154	47.075	5.959	48.248	3.27%	-2.43%
			5775	6.171	47.058	5.971	48.234	3.35%	-2.44%
			5785	6.189	47.047	5.982	48.220	3.46%	-2.43%
			5795	6.205	47.028	5.994	48.207	3.52%	-2.45%
			5800	6.214	47.015	6.000	48.200	3.57%	-2.46%
			5805	6.222	47.005	6.006	48.193	3.60%	-2.47%
			5825	6.251	46.961	6.029	48.166	3.68%	-2.50%
			5835	6.265	46.937	6.042	48.130	3.69%	-2.48%
			5845	6.279	46.910	6.054	48.110	3.72%	-2.49%
			5855	6.294	46.892	6.066	48.093	3.76%	-2.50%
			5865	6.303	46.871	6.077	48.080	3.72%	-2.51%
			5875	6.316	46.851	6.088	48.067	3.75%	-2.53%
			5885	6.334	46.830	6.100	48.053	3.84%	-2.55%
			5905	6.368	46.812	6.122	48.027	4.02%	-2.53%

Table 10-9
Measured Body Tissue Properties (Cont.)

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
06/13/2022	5200-5800 Body	21.2	5180	5.314	47.558	5.276	49.041	0.72%	-3.02%
			5190	5.327	47.534	5.288	49.028	0.74%	-3.05%
			5200	5.345	47.516	5.299	49.014	0.87%	-3.06%
			5210	5.365	47.499	5.311	49.001	1.02%	-3.07%
			5220	5.379	47.477	5.323	48.987	1.05%	-3.08%
			5240	5.408	47.431	5.346	48.960	1.16%	-3.12%
			5250	5.423	47.410	5.358	48.947	1.21%	-3.14%
			5260	5.439	47.392	5.369	48.933	1.30%	-3.15%
			5270	5.452	47.372	5.381	48.919	1.32%	-3.16%
			5280	5.470	47.362	5.393	48.906	1.43%	-3.16%
			5290	5.487	47.355	5.404	48.892	1.54%	-3.14%
			5300	5.501	47.340	5.416	48.879	1.57%	-3.15%
			5310	5.512	47.319	5.428	48.865	1.55%	-3.16%
			5320	5.524	47.292	5.439	48.851	1.56%	-3.19%
			5500	5.799	46.955	5.650	48.607	2.64%	-3.40%
			5510	5.816	46.946	5.661	48.594	2.74%	-3.39%
			5520	5.832	46.943	5.673	48.580	2.80%	-3.37%
			5530	5.844	46.935	5.685	48.566	2.80%	-3.36%
			5540	5.855	46.920	5.696	48.553	2.79%	-3.36%
			5550	5.865	46.895	5.708	48.539	2.75%	-3.39%
			5560	5.878	46.864	5.720	48.526	2.76%	-3.42%
			5580	5.912	46.805	5.743	48.499	2.94%	-3.49%
			5600	5.952	46.772	5.766	48.471	3.23%	-3.51%
			5610	5.970	46.761	5.778	48.458	3.32%	-3.50%
			5620	5.985	46.753	5.790	48.444	3.37%	-3.49%
			5640	6.010	46.742	5.813	48.417	3.39%	-3.46%
			5660	6.032	46.703	5.837	48.390	3.34%	-3.49%
			5670	6.043	46.672	5.848	48.376	3.33%	-3.52%
			5680	6.056	46.642	5.860	48.363	3.34%	-3.56%
			5690	6.072	46.614	5.872	48.349	3.41%	-3.59%
			5700	6.090	46.587	5.883	48.336	3.52%	-3.62%
			5710	6.108	46.575	5.895	48.322	3.61%	-3.62%
			5720	6.124	46.563	5.907	48.309	3.67%	-3.61%
			5745	6.162	46.538	5.936	48.275	3.81%	-3.60%
			5750	6.168	46.531	5.942	48.268	3.80%	-3.60%
			5755	6.173	46.526	5.947	48.261	3.80%	-3.60%
			5765	6.183	46.504	5.959	48.248	3.76%	-3.61%
			5775	6.198	46.473	5.971	48.234	3.80%	-3.65%
			5785	6.216	46.447	5.982	48.220	3.91%	-3.68%
			5795	6.233	46.429	5.994	48.207	3.99%	-3.69%
			5800	6.240	46.422	6.000	48.200	4.00%	-3.69%
			5805	6.245	46.415	6.006	48.193	3.98%	-3.69%
			5825	6.269	46.368	6.029	48.166	3.98%	-3.73%
			5835	6.288	46.343	6.042	48.130	4.07%	-3.71%
			5845	6.304	46.338	6.054	48.110	4.13%	-3.68%
			5855	6.315	46.322	6.066	48.093	4.10%	-3.68%
			5865	6.327	46.294	6.077	48.080	4.11%	-3.71%
			5875	6.340	46.263	6.088	48.067	4.14%	-3.75%
			5885	6.353	46.239	6.100	48.053	4.15%	-3.77%
			5905	6.372	46.206	6.122	48.027	4.08%	-3.79%

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.

10.2 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 Appendix F.

Table 10-10
System Verification Results – 1g

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR1g (W/kg)	1W Target SAR1g (W/kg)	1W Normalized SAR 1g (W/kg)	Deviation1g (%)
K4	750	HEAD	05/16/2022	21.8	21.7	0.20	1046	7637	1.710	8.54	8.550	0.12%
L	750	HEAD	06/02/2022	24.6	22.5	0.20	1054	7670	1.700	8.52	8.500	-0.23%
K4	835	HEAD	05/17/2022	21.8	21.4	0.20	4d119	7637	2.010	9.66	10.050	4.04%
K4	835	HEAD	05/22/2022	21.7	21.3	0.20	4d119	7637	2.060	9.66	10.300	6.63%
L	835	HEAD	06/02/2022	24.6	22.5	0.20	4d132	7670	2.070	9.66	10.350	7.14%
K5	1750	HEAD	05/31/2022	21.0	20.4	0.10	1051	7491	3.630	37.30	36.300	-2.68%
L	1750	HEAD	06/04/2022	21.9	21.4	0.10	1008	7670	3.780	37.40	37.800	1.07%
K2	1900	HEAD	05/29/2022	21.1	21.5	0.10	5d141	7640	4.090	40.30	40.900	1.49%
G	1900	HEAD	06/02/2022	23.0	21.8	0.10	5d080	7527	4.230	40.50	42.300	4.44%
J	2450	HEAD	05/16/2022	20.0	21.0	0.10	981	7570	5.230	53.90	52.300	-2.97%
J	2450	HEAD	05/18/2022	20.0	20.5	0.10	719	7570	5.330	55.00	53.300	-3.09%
K4	2450	HEAD	05/30/2022	21.6	22.0	0.10	882	7637	5.210	51.60	52.100	0.97%
K4	2600	HEAD	05/30/2022	21.6	22.0	0.10	1126	7637	5.800	56.40	58.000	2.84%
P	2600	HEAD	06/14/2022	22.9	21.7	0.10	1004	7410	5.930	58.10	59.300	2.07%
E	3500	HEAD	06/16/2022	21.3	21.9	0.10	1097	7538	6.070	66.40	60.700	-8.58%
E	3700	HEAD	06/16/2022	21.3	21.9	0.10	1018	7538	6.270	67.00	62.700	-6.42%
E	3900	HEAD	06/16/2022	21.3	21.9	0.10	1073	7538	7.180	69.70	71.800	3.01%
G	5250	HEAD	05/19/2022	23.5	22.2	0.05	1057	7527	3.870	81.20	77.400	-4.68%
G	5600	HEAD	05/19/2022	23.5	22.2	0.05	1057	7527	4.140	84.20	82.800	-1.66%
G	5750	HEAD	05/19/2022	23.5	22.2	0.05	1057	7527	3.970	80.80	79.400	-1.73%
G	5800	HEAD	05/19/2022	23.5	22.2	0.05	1057	7527	3.880	82.10	77.600	-5.48%
K1	750	BODY	05/16/2022	21.4	20.9	0.20	1046	7558	1.720	8.68	8.600	-0.92%
K1	750	BODY	05/24/2022	21.1	20.5	0.20	1046	7558	1.730	8.68	8.650	-0.35%
I	750	BODY	06/16/2022	22.3	22.5	0.20	1161	7660	1.790	8.79	8.950	1.82%
I	750	BODY	06/19/2022	21.4	21.3	0.20	1161	7660	1.730	8.79	8.650	-1.59%
K4	835	BODY	05/11/2022	21.3	21.2	0.20	4d119	7637	1.990	9.91	9.950	0.40%
K1	835	BODY	05/11/2022	20.5	20.3	0.20	4d119	7558	2.090	9.91	10.450	5.45%
K4	835	BODY	05/12/2022	22.0	22.7	0.20	4d119	7637	2.070	9.91	10.350	4.44%
K1	835	BODY	05/22/2022	20.5	20.4	0.20	4d119	7558	2.090	9.91	10.450	5.45%
K4	835	BODY	05/26/2022	22.1	21.4	0.20	4d119	7637	2.070	9.91	10.350	4.44%
L	835	BODY	06/16/2022	23.0	21.6	0.20	4d133	7670	2.030	9.69	10.150	4.75%
L	1750	BODY	05/18/2022	21.3	21.4	0.10	1008	7670	3.890	37.80	38.900	2.91%
L	1750	BODY	05/20/2022	22.0	21.0	0.10	1008	7670	3.900	37.80	39.000	3.17%
AM4	1750	BODY	05/20/2022	22.9	21.4	0.10	1104	3837	3.690	36.30	36.900	1.65%
L	1750	BODY	05/22/2022	23.2	21.1	0.10	1008	7670	4.030	37.80	40.300	6.61%
AM8	1750	BODY	05/24/2022	18.8	19.3	0.10	1104	7546	3.590	36.30	35.900	-1.10%
I	1750	BODY	07/11/2022	20.5	20.1	0.10	1150	7660	3.800	37.80	38.000	0.53%
A	1900	BODY	05/08/2022	22.1	20.9	0.10	5d149	7406	4.000	40.40	40.000	-0.99%
A	1900	BODY	05/10/2022	24.9	22.2	0.10	5d149	7406	4.370	40.40	43.700	8.17%
A	1900	BODY	05/16/2022	24.7	22.5	0.10	5d149	7406	4.290	40.40	42.900	6.19%
AM7	1900	BODY	05/17/2022	21.5	22.2	0.10	5d181	7674	4.050	39.70	40.500	2.02%
AM7	1900	BODY	05/19/2022	21.9	21.7	0.10	5d180	7674	4.050	39.00	40.500	3.85%
E	1900	BODY	06/13/2022	21.9	21.1	0.10	5d080	7538	4.230	40.70	42.300	3.93%
E	1900	BODY	07/05/2022	20.9	20.8	0.10	5d148	7538	4.330	39.90	43.300	8.52%
AM3	2450	BODY	05/18/2022	24.3	21.6	0.10	921	7427	4.950	49.70	49.500	-0.40%
J	2450	BODY	05/19/2022	19.8	22.2	0.10	981	7570	5.030	50.30	50.300	0.00%
J	2450	BODY	05/21/2022	20.1	20.2	0.10	981	7570	5.030	50.30	50.300	0.00%
S	2450	BODY	06/14/2022	20.7	21.8	0.10	797	7552	4.830	49.40	48.300	-2.23%
AM3	2600	BODY	05/18/2022	24.3	21.6	0.10	1069	7427	5.460	54.40	54.600	0.37%
AM4	2600	BODY	05/25/2022	23.3	21.3	0.10	1069	3837	5.680	54.40	56.800	4.41%
S	2600	BODY	06/14/2022	20.7	21.8	0.10	1071	7552	5.550	54.30	55.500	2.21%
AM1	3500	BODY	05/18/2022	22.9	21.4	0.10	1126	7639	6.650	63.60	66.500	4.56%
AM7	3500	BODY	05/30/2022	21.6	21.4	0.10	1055	7674	6.430	65.00	64.300	-1.08%
AM7	3700	BODY	06/01/2022	20.1	20.2	0.10	1097	7674	6.480	62.30	64.800	4.01%
L	3700	BODY	06/14/2022	22.0	21.0	0.10	1018	7670	6.430	63.50	64.300	1.26%
AM7	3900	BODY	06/01/2022	20.1	20.2	0.10	1062	7674	6.730	66.30	67.300	1.51%
L	3900	BODY	06/14/2022	22.0	21.0	0.10	1073	7670	6.170	64.30	61.700	-4.04%
G	5250	BODY	05/09/2022	23.9	21.3	0.05	1057	7527	3.520	74.20	70.400	-5.12%
G	5250	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	3.560	74.10	71.200	-3.91%
G	5600	BODY	05/09/2022	23.9	21.3	0.05	1057	7527	3.740	77.00	74.800	-2.86%
G	5600	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	3.700	76.90	74.000	-3.77%
G	5750	BODY	05/09/2022	23.9	21.3	0.05	1057	7527	3.550	74.90	71.000	-5.21%
G	5750	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	3.480	74.40	69.600	-6.45%
G	5800	BODY	05/09/2022	23.9	21.3	0.05	1057	7527	3.500	74.80	70.000	-6.42%
G	5800	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	3.530	73.50	70.600	-3.95%

Table 10-11
System Verification Results – 10g Body

System Verification TARGET & MEASURED												
SAR System	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp. (C)	Liquid Temp. (C)	Input Power (W)	Source SN	Probe SN	Measured SAR10g (W/kg)	1W Target SAR10g (W/kg)	1W Normalized SAR10g (W/kg)	Deviation10g (%)
G	13	HEAD	06/09/2022	24.0	21.9	1.00	1002	7527	0.317	0.34	0.317	-7.85%
K1	750	BODY	05/16/2022	21.4	20.9	0.20	1046	7558	1.140	5.72	5.700	-0.35%
K1	750	BODY	05/19/2022	20.7	20.7	0.20	1046	7558	1.140	5.72	5.700	-0.35%
I	750	BODY	06/16/2022	22.3	22.5	0.20	1161	7660	1.180	5.84	5.900	1.03%
K1	835	BODY	05/11/2022	20.5	20.3	0.20	4d119	7558	1.370	6.59	6.850	3.95%
K1	835	BODY	05/22/2022	20.5	20.4	0.20	4d119	7558	1.370	6.59	6.850	3.95%
L	835	BODY	06/16/2022	23.0	21.6	0.20	4d133	7670	1.340	6.36	6.700	5.35%
L	1750	BODY	05/18/2022	21.3	21.4	0.10	1008	7670	2.060	19.90	20.600	3.52%
L	1750	BODY	05/20/2022	22.0	21.0	0.10	1008	7670	2.040	19.90	20.400	2.51%
L	1750	BODY	05/22/2022	23.2	21.1	0.10	1008	7670	2.130	19.90	21.300	7.04%
AM8	1750	BODY	05/26/2022	19.9	19.8	0.10	1104	7546	1.990	19.30	19.900	3.11%
AM8	1750	BODY	05/30/2022	20.7	20.2	0.10	1104	7546	2.000	19.30	20.000	3.63%
I	1750	BODY	07/11/2022	20.5	20.1	0.10	1150	7660	1.990	20.00	19.900	-0.50%
A	1900	BODY	05/08/2022	22.1	20.9	0.10	5d149	7406	2.080	21.10	20.800	-1.42%
A	1900	BODY	05/10/2022	24.9	22.2	0.10	5d149	7406	2.270	21.10	22.700	7.58%
A	1900	BODY	05/16/2022	24.7	22.5	0.10	5d149	7406	2.230	21.10	22.300	5.69%
AM7	1900	BODY	05/17/2022	21.5	22.2	0.10	5d181	7674	2.100	21.00	21.000	0.00%
AM7	1900	BODY	05/19/2022	21.9	21.7	0.10	5d180	7674	2.100	20.60	21.000	1.94%
AM7	1900	BODY	05/23/2022	22.7	22.0	0.10	5d180	7674	2.140	20.60	21.400	3.88%
E	1900	BODY	06/13/2022	21.9	21.1	0.10	5d080	7538	2.170	21.40	21.700	1.40%
AM3	2450	BODY	05/18/2022	24.3	21.6	0.10	921	7427	2.280	23.60	22.800	-3.39%
J	2450	BODY	05/21/2022	20.1	20.2	0.10	981	7570	2.280	23.70	22.800	-3.80%
S	2450	BODY	06/14/2022	20.7	21.8	0.10	797	7552	2.240	23.40	22.400	-4.27%
AM3	2600	BODY	05/18/2022	24.3	21.6	0.10	1069	7427	2.400	24.20	24.000	-0.83%
AM4	2600	BODY	05/25/2022	23.3	21.3	0.10	1069	3837	2.550	24.20	25.500	5.37%
S	2600	BODY	06/14/2022	20.7	21.8	0.10	1071	7552	2.460	24.10	24.600	2.07%
AM3	3500	BODY	05/23/2022	22.0	21.2	0.10	1055	7427	2.480	24.30	24.800	2.06%
AM7	3500	BODY	05/30/2022	21.6	21.4	0.10	1055	7674	2.410	24.30	24.100	-0.82%
AM3	3700	BODY	05/23/2022	22.9	21.5	0.10	1002	7427	2.490	23.20	24.900	7.33%
AM1	3700	BODY	06/06/2022	21.7	22.0	0.10	1002	7639	2.500	23.20	25.000	7.76%
AM3	3900	BODY	05/23/2022	22.9	21.5	0.10	1062	7427	2.390	23.10	23.900	3.46%
AM1	3900	BODY	06/06/2022	21.7	22.0	0.10	1062	7639	2.420	23.10	24.200	4.76%
G	5250	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	1.000	20.80	20.000	-3.85%
K	5250	BODY	06/13/2022	22.9	21.2	0.05	1057	7659	1.060	20.60	21.200	2.91%
G	5600	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	1.010	21.30	20.200	-5.16%
K	5600	BODY	06/13/2022	22.9	21.2	0.05	1057	7659	1.160	21.20	23.200	9.43%
G	5750	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	0.965	20.70	19.300	-6.76%
K	5750	BODY	**06/13/2022**	22.9	21.2	0.05	1057	7659	1.070	20.70	21.400	3.38%
G	5800	BODY	05/16/2022	23.4	21.9	0.05	1191	7527	0.977	20.20	19.540	-3.27%
K	5800	BODY	06/13/2022	22.9	21.2	0.05	1057	7659	1.080	20.50	21.600	5.37%

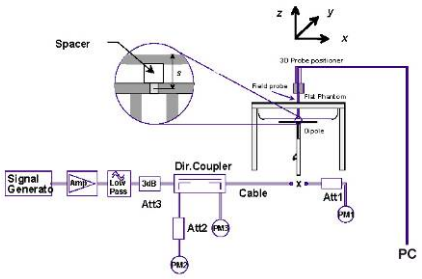

Figure 10-1
System Verification Setup Diagram

Figure 10-2
System Verification Setup Photo

11 SAR DATA SUMMARY

11.1 Standalone Head SAR Data

Table 11-1
GSM 850 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
848.80	251	Right	Cheek	GSM 850	GSM	A+B	0791M	33.0	31.88	-0.09	1:8.3	0.059	1.294	0.076	
848.80	251	Right	Tilt	GSM 850	GSM	A+B	0791M	33.0	31.88	0.18	1:8.3	0.028	1.294	0.036	
848.80	251	Left	Cheek	GSM 850	GSM	A+B	0791M	33.0	31.88	0.16	1:8.3	0.057	1.294	0.074	
848.80	251	Left	Tilt	GSM 850	GSM	A+B	0791M	33.0	31.88	0.08	1:8.3	0.036	1.294	0.047	
848.80	251	Right	Cheek	GSM 850	GSM	A	0791M	33.0	31.88	-0.02	1:8.3	0.062	1.294	0.080	A1
848.80	251	Right	Tilt	GSM 850	GSM	A	0791M	33.0	31.88	0.10	1:8.3	0.025	1.294	0.032	
848.80	251	Left	Cheek	GSM 850	GSM	A	0791M	33.0	31.88	0.00	1:8.3	0.054	1.294	0.070	
848.80	251	Left	Tilt	GSM 850	GSM	A	0791M	33.0	31.88	0.17	1:8.3	0.033	1.294	0.043	
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 11-2
GSM 1900 Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1909.80	810	Right	Cheek	GSM 1900	GSM	B	0427M	30.5	29.53	-0.01	1:8.3	0.025	1.250	0.031	
1909.80	810	Right	Tilt	GSM 1900	GSM	B	0427M	30.5	29.53	-0.13	1:8.3	0.039	1.250	0.049	A2
1909.80	810	Left	Cheek	GSM 1900	GSM	B	0427M	30.5	29.53	-0.06	1:8.3	0.037	1.250	0.046	
1909.80	810	Left	Tilt	GSM 1900	GSM	B	0427M	30.5	29.53	0.04	1:8.3	0.016	1.250	0.020	
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 11-3
UMTS 850 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Tune State	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
826.40	4132	Right	Cheek	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	-0.02	1:1	0.124	1.164	0.144	A3
826.40	4132	Right	Tilt	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.20	1:1	0.033	1.164	0.038	
826.40	4132	Left	Cheek	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	-0.16	1:1	0.075	1.164	0.087	
826.40	4132	Left	Tilt	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	-0.01	1:1	0.043	1.164	0.050	
826.40	4132	Right	Cheek	UMTS 850	RMC	A	0	0791M	25.5	24.84	0.07	1:1	0.113	1.164	0.132	
826.40	4132	Right	Tilt	UMTS 850	RMC	A	0	0791M	25.5	24.84	0.09	1:1	0.034	1.164	0.040	
826.40	4132	Left	Cheek	UMTS 850	RMC	A	9	0791M	25.5	24.84	0.13	1:1	0.067	1.164	0.078	
826.40	4132	Left	Tilt	UMTS 850	RMC	A	9	0791M	25.5	24.84	0.12	1:1	0.039	1.164	0.045	
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 11-4
UMTS 1750 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.											(W/kg)		(W/kg)		
1732.40	1412	Right	Cheek	UMTS 1750	RMC	B	0427M	25.0	24.13	0.01	1:1	0.092	1.222	0.112	A4	
1732.40	1412	Right	Tilt	UMTS 1750	RMC	B	0427M	25.0	24.13	0.02	1:1	0.065	1.222	0.079		
1732.40	1412	Left	Cheek	UMTS 1750	RMC	B	0427M	25.0	24.13	0.16	1:1	0.091	1.222	0.111		
1732.40	1412	Left	Tilt	UMTS 1750	RMC	B	0427M	25.0	24.13	0.09	1:1	0.054	1.222	0.066		
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 11-5
UMTS 1900 Head SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.											(W/kg)		(W/kg)		
1852.40	9262	Right	Cheek	UMTS 1900	RMC	B	0427M	25.0	24.45	0.02	1:1	0.048	1.135	0.054		
1852.40	9262	Right	Tilt	UMTS 1900	RMC	B	0427M	25.0	24.45	-0.14	1:1	0.089	1.135	0.101	A5	
1852.40	9262	Left	Cheek	UMTS 1900	RMC	B	0427M	25.0	24.45	-0.02	1:1	0.078	1.135	0.089		
1852.40	9262	Left	Tilt	UMTS 1900	RMC	B	0427M	25.0	24.45	0.17	1:1	0.058	1.135	0.066		
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 11-6
LTE Band 12 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Test Position	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	Right	Cheek	LTE Band 12	A+B	36	0791M	10	QPSK	1	0	25.5	24.91	0	0.11	1:1	0.161	1.146	0.185	A6
707.50	23095	Mid	Right	Cheek	LTE Band 12	A+B	36	0791M	10	QPSK	25	12	24.5	23.80	1	0.06	1:1	0.135	1.175	0.159	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A+B	36	0791M	10	QPSK	1	0	25.5	24.91	0	0.18	1:1	0.080	1.146	0.092	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A+B	36	0791M	10	QPSK	25	12	24.5	23.80	1	-0.05	1:1	0.065	1.175	0.076	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A+B	108	0791M	10	QPSK	1	0	25.5	24.91	0	-0.16	1:1	0.100	1.146	0.115	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A+B	108	0791M	10	QPSK	25	12	24.5	23.80	1	0.15	1:1	0.078	1.175	0.092	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A+B	36	0791M	10	QPSK	1	0	25.5	24.91	0	0.06	1:1	0.050	1.146	0.057	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A+B	36	0791M	10	QPSK	25	12	24.5	23.80	1	0.07	1:1	0.040	1.175	0.047	
707.50	23095	Mid	Right	Cheek	LTE Band 12	A	46	0427M	10	QPSK	1	0	25.5	24.91	0	-0.02	1:1	0.116	1.146	0.133	
707.50	23095	Mid	Right	Cheek	LTE Band 12	A	46	0427M	10	QPSK	25	12	24.5	23.80	1	0.01	1:1	0.085	1.175	0.100	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A	46	0427M	10	QPSK	1	0	25.5	24.91	0	-0.07	1:1	0.060	1.146	0.069	
707.50	23095	Mid	Right	Tilt	LTE Band 12	A	46	0427M	10	QPSK	25	12	24.5	23.80	1	0.08	1:1	0.044	1.175	0.052	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A	46	0427M	10	QPSK	1	0	25.5	24.91	0	0.01	1:1	0.098	1.146	0.112	
707.50	23095	Mid	Left	Cheek	LTE Band 12	A	46	0427M	10	QPSK	25	12	24.5	23.80	1	0.01	1:1	0.074	1.175	0.087	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A	46	0427M	10	QPSK	1	0	25.5	24.91	0	0.01	1:1	0.052	1.146	0.060	
707.50	23095	Mid	Left	Tilt	LTE Band 12	A	46	0427M	10	QPSK	25	12	24.5	23.80	1	0.07	1:1	0.039	1.175	0.046	
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 11-7
LTE Band 13 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Test Position	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot =
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	Right	Cheek	LTE Band 13	A+B	108	0791M	10	QPSK	1	0	24.0	23.17	0	0.01	1:1	0.150	1.211	0.182	A7
782.00	23230	Mid	Right	Cheek	LTE Band 13	A+B	108	0791M	10	QPSK	25	12	23.0	22.22	1	0.05	1:1	0.112	1.197	0.134	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A+B	108	0791M	10	QPSK	1	0	24.0	23.17	0	0.20	1:1	0.065	1.211	0.079	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A+B	108	0791M	10	QPSK	25	12	23.0	22.22	1	0.13	1:1	0.043	1.197	0.051	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A+B	108	0791M	10	QPSK	1	0	24.0	23.17	0	0.00	1:1	0.109	1.211	0.132	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A+B	108	0791M	10	QPSK	25	12	23.0	22.22	1	0.07	1:1	0.089	1.197	0.107	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A+B	108	0791M	10	QPSK	1	0	24.0	23.17	0	0.08	1:1	0.058	1.211	0.070	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A+B	108	0791M	10	QPSK	25	12	23.0	22.22	1	0.14	1:1	0.051	1.197	0.061	
782.00	23230	Mid	Right	Cheek	LTE Band 13	A	9	0791M	10	QPSK	1	0	24.0	23.17	0	0.06	1:1	0.119	1.211	0.144	
782.00	23230	Mid	Right	Cheek	LTE Band 13	A	9	0791M	10	QPSK	25	12	23.0	22.22	1	0.12	1:1	0.098	1.197	0.117	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A	9	0791M	10	QPSK	1	0	24.0	23.17	0	0.14	1:1	0.054	1.211	0.065	
782.00	23230	Mid	Right	Tilt	LTE Band 13	A	9	0791M	10	QPSK	25	12	23.0	22.22	1	0.12	1:1	0.041	1.197	0.049	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A	9	0791M	10	QPSK	1	0	24.0	23.17	0	0.00	1:1	0.096	1.211	0.116	
782.00	23230	Mid	Left	Cheek	LTE Band 13	A	36	0791M	10	QPSK	25	12	23.0	22.22	1	0.14	1:1	0.071	1.197	0.085	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A	9	0791M	10	QPSK	1	0	24.0	23.17	0	-0.06	1:1	0.047	1.211	0.057	
782.00	23230	Mid	Left	Tilt	LTE Band 13	A	9	0791M	10	QPSK	25	12	23.0	22.22	1	0.14	1:1	0.033	1.197	0.040	
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 11-8
LTE Band 26 (Cell) Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Test Position	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	Right	Cheek	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.09	1:1	0.128	1.245	0.159	A8
831.50	26865	Mid	Right	Cheek	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.07	1:1	0.083	1.346	0.112	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.12	1:1	0.052	1.245	0.065	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	-0.16	1:1	0.030	1.346	0.040	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.04	1:1	0.076	1.245	0.095	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.18	1:1	0.054	1.346	0.073	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.20	1:1	0.044	1.245	0.055	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	-0.16	1:1	0.038	1.346	0.051	
831.50	26865	Mid	Right	Cheek	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	0.15	1:1	0.101	1.245	0.126	
831.50	26865	Mid	Right	Cheek	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	0.18	1:1	0.072	1.346	0.097	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	0.03	1:1	0.041	1.245	0.051	
831.50	26865	Mid	Right	Tilt	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	-0.08	1:1	0.026	1.346	0.035	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	-0.12	1:1	0.077	1.245	0.096	
831.50	26865	Mid	Left	Cheek	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	0.00	1:1	0.049	1.346	0.066	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	0.13	1:1	0.038	1.245	0.047	
831.50	26865	Mid	Left	Tilt	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	0.17	1:1	0.035	1.346	0.047	
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 11-9
LTE Band 66 (AWS) Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Test Position	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	Right	Cheek	LTE Band 66 (AWS)	B	0428M	20	QPSK	1	50	25.0	24.13	0	0.00	1:1	0.092	1.222	0.112	
1745.00	132322	Mid	Right	Cheek	LTE Band 66 (AWS)	B	0428M	20	QPSK	50	25	24.0	22.87	1	0.02	1:1	0.072	1.297	0.093	
1745.00	132322	Mid	Right	Tilt	LTE Band 66 (AWS)	B	0428M	20	QPSK	1	50	25.0	24.13	0	-0.15	1:1	0.054	1.222	0.066	
1745.00	132322	Mid	Right	Tilt	LTE Band 66 (AWS)	B	0428M	20	QPSK	50	25	24.0	22.87	1	-0.11	1:1	0.042	1.297	0.054	
1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	B	0428M	20	QPSK	1	50	25.0	24.13	0	-0.16	1:1	0.074	1.222	0.090	
1745.00	132322	Mid	Left	Cheek	LTE Band 66 (AWS)	B	0428M	20	QPSK	50	25	24.0	22.87	1	-0.05	1:1	0.057	1.297	0.074	
1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	B	0428M	20	QPSK	1	50	25.0	24.13	0	0.17	1:1	0.040	1.222	0.049	
1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	B	0428M	20	QPSK	50	25	24.0	22.87	1	0.03	1:1	0.029	1.297	0.038	
1720.00	132072	Low	Right	Cheek	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	23.06	0	-0.03	1:1	0.526	1.033	0.543	
1720.00	132072	Low	Right	Cheek	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	23.08	0	0.01	1:1	0.537	1.028	0.552	
1720.00	132072	Low	Right	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	23.06	0	-0.01	1:1	0.701	1.033	0.724	
1720.00	132072	Low	Right	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	23.08	0	-0.05	1:1	0.704	1.028	0.724	
1720.00	132072	Low	Left	Cheek	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	23.06	0	-0.16	1:1	0.475	1.033	0.491	
1720.00	132072	Low	Left	Cheek	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	23.08	0	0.02	1:1	0.454	1.028	0.467	
1720.00	132072	Low	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	23.06	0	-0.01	1:1	0.739	1.033	0.763	
1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	22.76	0	0.01	1:1	0.673	1.107	0.745	
1770.00	132572	High	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	1	50	23.2	22.98	0	0.03	1:1	0.662	1.052	0.696	
1720.00	132072	Low	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	23.08	0	-0.07	1:1	0.748	1.028	0.769	A9
1745.00	132322	Mid	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	22.77	0	0.04	1:1	0.673	1.104	0.743	
1770.00	132572	High	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	50	25	23.2	22.94	0	0.02	1:1	0.654	1.062	0.695	
1720.00	132072	Low	Left	Tilt	LTE Band 66 (AWS)	F	0383M	20	QPSK	100	0	23.2	22.87	0	0.05	1:1	0.717	1.079	0.774	
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 11-10
LTE Band 25 (PCS) Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Test Position	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1860.00	26140	Low	Right	Cheek	LTE Band 25 (PCS)	B	0427M	20	QPSK	1	99	25.0	23.92	0	0.07	1:1	0.047	1.282	0.060	
1860.00	26140	Low	Right	Cheek	LTE Band 25 (PCS)	B	0427M	20	QPSK	50	0	24.0	22.78	1	-0.16	1:1	0.038	1.324	0.050	
1860.00	26140	Low	Right	Tilt	LTE Band 25 (PCS)	B	0427M	20	QPSK	1	99	25.0	23.92	0	-0.05	1:1	0.071	1.282	0.091	A10
1860.00	26140	Low	Right	Tilt	LTE Band 25 (PCS)	B	0427M	20	QPSK	50	0	24.0	22.78	1	-0.10	1:1	0.058	1.324	0.077	
1860.00	26140	Low	Left	Cheek	LTE Band 25 (PCS)	B	0427M	20	QPSK	1	99	25.0	23.92	0	-0.10	1:1	0.068	1.282	0.087	
1860.00	26140	Low	Left	Cheek	LTE Band 25 (PCS)	B	0427M	20	QPSK	50	0	24.0	22.78	1	-0.10	1:1	0.056	1.324	0.074	
1860.00	26140	Low	Left	Tilt	LTE Band 25 (PCS)	B	0427M	20	QPSK	1	99	25.0	23.92	0	-0.15	1:1	0.047	1.282	0.060	
1860.00	26140	Low	Left	Tilt	LTE Band 25 (PCS)	B	0427M	20	QPSK	50	0	24.0	22.78	1	0.14	1:1	0.034	1.324	0.045	
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 11-11
LTE Band 41 Head SAR

MEASUREMENT RESULTS																					
Power Class	FREQUENCY			Side	Test Position	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
	MHz	Ch.																(W/kg)		(W/kg)	
Power Class 3	2680.00	41490	High	Right	Cheek	LTE Band 41	B	0791M	20	QPSK	1	50	23.0	21.84	0	0.18	1:1.58	0.035	1.306	0.046	
Power Class 3	2680.00	41490	High	Right	Cheek	LTE Band 41	B	0791M	20	QPSK	50	50	23.0	21.87	0	0.06	1:1.58	0.032	1.297	0.042	
Power Class 2	2680.00	41490	High	Right	Cheek	LTE Band 41	B	0791M	20	QPSK	1	50	24.6	23.72	0	0.10	1:2.31	0.038	1.225	0.047	A11
Power Class 3	2680.00	41490	High	Right	Tilt	LTE Band 41	B	0791M	20	QPSK	1	50	23.0	21.84	0	-0.05	1:1.58	0.012	1.306	0.016	
Power Class 3	2680.00	41490	High	Right	Tilt	LTE Band 41	B	0791M	20	QPSK	50	50	23.0	21.87	0	0.06	1:1.58	0.007	1.297	0.009	
Power Class 3	2680.00	41490	High	Left	Cheek	LTE Band 41	B	0791M	20	QPSK	1	50	23.0	21.84	0	0.02	1:1.58	0.020	1.306	0.026	
Power Class 3	2680.00	41490	High	Left	Cheek	LTE Band 41	B	0791M	20	QPSK	50	50	23.0	21.87	0	0.18	1:1.58	0.016	1.297	0.021	
Power Class 3	2680.00	41490	High	Left	Tilt	LTE Band 41	B	0791M	20	QPSK	1	50	23.0	21.84	0	0.16	1:1.58	0.020	1.306	0.026	
Power Class 3	2680.00	41490	High	Left	Tilt	LTE Band 41	B	0791M	20	QPSK	50	50	23.0	21.87	0	0.14	1:1.58	0.020	1.297	0.026	
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 11-12
NR Band n12 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Test Position	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	Right	Cheek	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.04	1:1	0.125	1.374	0.172	
707.50	141500	Mid	Right	Cheek	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.06	1:1	0.127	1.377	0.175	A12
707.50	141500	Mid	Right	Cheek	NR Band n12	A+B	36	0010M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	0.08	1:1	0.080	1.445	0.116	
707.50	141500	Mid	Right	Tilt	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.03	1:1	0.059	1.374	0.081	
707.50	141500	Mid	Right	Tilt	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.08	1:1	0.057	1.377	0.078	
707.50	141500	Mid	Left	Cheek	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.07	1:1	0.102	1.374	0.140	
707.50	141500	Mid	Left	Cheek	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.08	1:1	0.098	1.377	0.135	
707.50	141500	Mid	Left	Tilt	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.04	1:1	0.053	1.374	0.073	
707.50	141500	Mid	Left	Tilt	NR Band n12	A+B	36	0010M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.06	1:1	0.049	1.377	0.067	
707.50	141500	Mid	Right	Cheek	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.15	1:1	0.080	1.374	0.110	
707.50	141500	Mid	Right	Cheek	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.04	1:1	0.081	1.377	0.112	
707.50	141500	Mid	Right	Cheek	NR Band n12	A	45	0344M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	-0.04	1:1	0.052	1.445	0.075	
707.50	141500	Mid	Right	Tilt	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.01	1:1	0.034	1.374	0.047	
707.50	141500	Mid	Right	Tilt	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.12	1:1	0.037	1.377	0.051	
707.50	141500	Mid	Left	Cheek	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.03	1:1	0.066	1.374	0.091	
707.50	141500	Mid	Left	Cheek	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.02	1:1	0.062	1.377	0.085	
707.50	141500	Mid	Left	Tilt	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.05	1:1	0.035	1.374	0.048	
707.50	141500	Mid	Left	Tilt	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.16	1:1	0.031	1.377	0.043	
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 11-13
NR Band n5 Head SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Test Position	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	Right	Cheek	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.11	1:1	0.068	1.222	0.083	
836.50	167300	Mid	Right	Cheek	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.06	1:1	0.071	1.230	0.087	
836.50	167300	Mid	Right	Tilt	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.12	1:1	0.042	1.222	0.051	
836.50	167300	Mid	Right	Tilt	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.06	1:1	0.045	1.230	0.055	
836.50	167300	Mid	Left	Cheek	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.00	1:1	0.075	1.222	0.092	
836.50	167300	Mid	Left	Cheek	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.074	1.230	0.091	
836.50	167300	Mid	Left	Cheek	NR Band n5 (Cell)	A+B	108	0010M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.01	1:1	0.052	1.268	0.066	
836.50	167300	Mid	Left	Tilt	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.13	1:1	0.050	1.222	0.061	
836.50	167300	Mid	Left	Tilt	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.10	1:1	0.051	1.230	0.063	
836.50	167300	Mid	Right	Cheek	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.01	1:1	0.100	1.222	0.122	A13
836.50	167300	Mid	Right	Cheek	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.03	1:1	0.096	1.230	0.118	
836.50	167300	Mid	Right	Cheek	NR Band n5 (Cell)	A	9	0344M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.04	1:1	0.068	1.268	0.086	
836.50	167300	Mid	Right	Tilt	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.12	1:1	0.038	1.222	0.046	
836.50	167300	Mid	Right	Tilt	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.03	1:1	0.038	1.230	0.047	
836.50	167300	Mid	Left	Cheek	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.05	1:1	0.078	1.222	0.095	
836.50	167300	Mid	Left	Cheek	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.04	1:1	0.079	1.230	0.097	
836.50	167300	Mid	Left	Tilt	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.21	1:1	0.043	1.222	0.053	
836.50	167300	Mid	Left	Tilt	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.05	1:1	0.043	1.230	0.053	
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 11-14
NR Band n66 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Test Position	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1720.00	344000	Low	Right	Cheek	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.02	1:1	0.068	1.076	0.073	
1720.00	344000	Low	Right	Cheek	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	-0.08	1:1	0.077	1.233	0.095	
1720.00	344000	Low	Right	Cheek	NR Band n66 (AWS)	B	0010M	20	CP-OFDM	QPSK	1	1	23.0	22.39	1.5	0.10	1:1	0.050	1.151	0.058	
1720.00	344000	Low	Right	Tilt	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.07	1:1	0.063	1.076	0.068	
1720.00	344000	Low	Right	Tilt	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	-0.08	1:1	0.076	1.233	0.094	
1720.00	344000	Low	Left	Cheek	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.08	1:1	0.081	1.076	0.087	
1720.00	344000	Low	Left	Cheek	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.11	1:1	0.064	1.233	0.079	
1720.00	344000	Low	Left	Tilt	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.02	1:1	0.043	1.076	0.046	
1720.00	344000	Low	Left	Tilt	NR Band n66 (AWS)	B	0010M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.16	1:1	0.046	1.233	0.057	
1770.00	354000	High	Right	Cheek	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.57	0	-0.05	1:1	0.482	1.104	0.532	
1770.00	354000	High	Right	Cheek	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	23.0	22.62	0	-0.03	1:1	0.479	1.091	0.523	
1770.00	354000	High	Right	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.57	0	0.16	1:1	0.596	1.104	0.658	
1770.00	354000	High	Right	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	23.0	22.62	0	0.03	1:1	0.613	1.091	0.669	
1770.00	354000	High	Left	Cheek	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.57	0	-0.02	1:1	0.417	1.104	0.460	
1770.00	354000	High	Left	Cheek	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	23.0	22.62	0	-0.01	1:1	0.405	1.091	0.442	
1720.00	344000	Low	Left	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.18	0	-0.01	1:1	0.661	1.208	**0.798**	A14
1745.00	349000	Mid	Left	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.37	0	0.04	1:1	0.648	1.156	0.749	
1770.00	354000	High	Left	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	23.0	22.57	0	-0.01	1:1	0.621	1.104	0.686	
1770.00	354000	High	Left	Tilt	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	23.0	22.62	0	0.02	1:1	0.621	1.091	0.678	
1770.00	354000	High	Left	Tilt	NR Band n66 (AWS)	F	0777M	20	CP-OFDM	QPSK	1	1	23.0	21.89	0	-0.01	1:1	0.573	1.291	0.740	
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 11-15
NR Band n25 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Test Position	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1860.00	372000	Low	Right	Cheek	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.10	1:1	0.053	1.303	0.069	
1860.00	372000	Low	Right	Cheek	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.06	1:1	0.056	1.265	0.071	
1860.00	372000	Low	Right	Tilt	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.08	1:1	0.079	1.303	0.103	A15
1860.00	372000	Low	Right	Tilt	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.03	1:1	0.078	1.265	0.099	
1860.00	372000	Low	Right	Tilt	NR Band n25 (PCS)	B	0776M	20	CP-OFDM	QPSK	1	1	23.0	21.87	1.5	-0.16	1:1	0.054	1.297	0.070	
1860.00	372000	Low	Left	Cheek	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.03	1:1	0.058	1.303	0.076	
1860.00	372000	Low	Left	Cheek	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.03	1:1	0.076	1.265	0.096	
1860.00	372000	Low	Left	Tilt	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.06	1:1	0.032	1.303	0.042	
1860.00	372000	Low	Left	Tilt	NR Band n25 (PCS)	B	0776M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.21	1:1	0.035	1.265	0.044	
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 11-16
NR Band n41 Head SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Test Position	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	Right	Cheek	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.05	1:1	0.204	1.148	0.234	
2592.99	518598	Mid	Right	Cheek	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.06	1:1	0.166	1.156	0.192	
2592.99	518598	Mid	Right	Tilt	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.15	1:1	0.259	1.148	0.297	
2592.99	518598	Mid	Right	Tilt	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.06	1:1	0.211	1.156	0.244	
2592.99	518598	Mid	Left	Cheek	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.14	1:1	0.177	1.148	0.203	
2592.99	518598	Mid	Left	Cheek	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.06	1:1	0.155	1.156	0.179	
2592.99	518598	Mid	Left	Tilt	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.07	1:1	0.285	1.148	0.327	A16
2592.99	518598	Mid	Left	Tilt	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	0.214	1.156	0.247	
2592.99	518598	Mid	Left	Tilt	NR Band n41	F	0820M	100	CP-OFDM	QPSK	1	1	19.0	18.20	0	-0.03	1:1	0.227	1.202	0.273	
2592.99	518598	Mid	Right	Cheek	NR Band n41	B	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.20	1:1	0.011	1.355	0.015	
2592.99	518598	Mid	Right	Tilt	NR Band n41	B	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.08	1:1	0.014	1.355	0.019	
2592.99	518598	Mid	Left	Cheek	NR Band n41	B	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.04	1:1	0.005	1.355	0.007	
2592.99	518598	Mid	Left	Tilt	NR Band n41	B	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.08	1:1	0.008	1.355	0.011	
2592.99	518598	Mid	Right	Cheek	NR Band n41	E	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.20	1:1	0.005	1.253	0.006	
2592.99	518598	Mid	Right	Tilt	NR Band n41	E	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.03	1:1	0.005	1.253	0.006	
2592.99	518598	Mid	Left	Cheek	NR Band n41	E	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	-0.13	1:1	0.001	1.253	0.001	
2592.99	518598	Mid	Left	Tilt	NR Band n41	E	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.06	1:1	0.001	1.253	0.001	
2592.99	518598	Mid	Right	Cheek	NR Band n41	C	0646M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.09	1:1	0.001	1.303	0.001	
2592.99	518598	Mid	Right	Tilt	NR Band n41	C	0646M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.09	1:1	0.003	1.303	0.004	
2592.99	518598	Mid	Left	Cheek	NR Band n41	C	0646M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.07	1:1	0.006	1.303	0.008	
2592.99	518598	Mid	Left	Tilt	NR Band n41	C	0646M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.08	1:1	0.000	1.303	0.000	
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 11-17
NR Band n77 Head SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Test Position	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.04	1:1	0.192	1.109	0.213	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.05	1:1	0.186	1.172	0.218	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.15	1:1	0.240	1.109	0.266	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.04	1:1	0.241	1.172	0.282	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.09	1:1	0.211	1.109	0.234	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.14	1:1	0.201	1.172	0.236	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.21	1:1	0.265	1.109	0.294	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	F	0107M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.02	1:1	0.257	1.172	0.301	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	F	0107M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	0.17	1:1	0.275	1.216	0.334	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.06	1:1	0.128	1.282	0.164	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.01	1:1	0.097	1.285	0.125	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.02	1:1	0.190	1.282	0.244	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.02	1:1	0.146	1.285	0.188	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.05	1:1	0.458	1.282	0.587	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.07	1:1	0.393	1.285	0.505	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	270	0	18.0	16.88	0	-0.01	1:1	0.351	1.294	0.454	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	16.79	0	0.03	1:1	0.503	1.321	0.664	A17
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.02	1:1	0.450	1.282	0.577	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.17	1:1	0.352	1.285	0.452	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	270	0	18.0	16.88	0	-0.13	1:1	0.323	1.294	0.418	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.03	1:1	0.000	1.479	0.000	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.08	1:1	0.000	1.479	0.000	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.20	1:1	0.000	1.479	0.000	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.01	1:1	0.002	1.479	0.003	
3500.01	633334	Mid	Right	Cheek	NR Band n77 DoD	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.20	1:1	0.000	1.054	0.000	
3500.01	633334	Mid	Right	Tilt	NR Band n77 DoD	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.05	1:1	0.000	1.054	0.000	
3500.01	633334	Mid	Left	Cheek	NR Band n77 DoD	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.06	1:1	0.005	1.054	0.005	
3500.01	633334	Mid	Left	Tilt	NR Band n77 DoD	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.16	1:1	0.000	1.054	0.000	
3930.00	662000	High	Right	Cheek	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.03	1:1	0.247	1.005	0.248	
3930.00	662000	High	Right	Cheek	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	-0.14	1:1	0.227	1.019	0.231	
3930.00	662000	High	Right	Tilt	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.07	1:1	0.269	1.005	0.270	
3930.00	662000	High	Right	Tilt	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.07	1:1	0.243	1.019	0.248	
3930.00	662000	High	Right	Tilt	NR Band n77	F	0107M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	-0.01	1:1	0.253	1.161	0.294	
3930.00	662000	High	Left	Cheek	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.03	1:1	0.125	1.005	0.126	
3930.00	662000	High	Left	Cheek	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.02	1:1	0.117	1.019	0.119	
3930.00	662000	High	Left	Tilt	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.01	1:1	0.175	1.005	0.176	
3930.00	662000	High	Left	Tilt	NR Band n77	F	0107M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.05	1:1	0.151	1.019	0.154	
3930.00	662000	High	Right	Cheek	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.01	1:1	0.204	1.102	0.225	
3930.00	662000	High	Right	Cheek	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.05	1:1	0.202	1.127	0.228	
3930.00	662000	High	Right	Tilt	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.09	1:1	0.309	1.102	0.341	A18
3930.00	662000	High	Right	Tilt	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.00	1:1	0.299	1.127	0.337	
3930.00	662000	High	Right	Tilt	NR Band n77	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	17.10	0	0.00	1:1	0.270	1.230	0.332	
3930.00	662000	High	Left	Cheek	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.02	1:1	0.212	1.102	0.234	
3930.00	662000	High	Left	Cheek	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.08	1:1	0.205	1.127	0.231	
3930.00	662000	High	Left	Tilt	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.01	1:1	0.281	1.102	0.310	
3930.00	662000	High	Left	Tilt	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.04	1:1	0.282	1.127	0.318	
3930.00	662000	High	Right	Cheek	NR Band n77	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.20	1:1	0.001	1.047	0.001	
3930.00	662000	High	Right	Tilt	NR Band n77	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.05	1:1	0.000	1.047	0.000	
3930.00	662000	High	Left	Cheek	NR Band n77	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.01	1:1	0.000	1.047	0.000	
3930.00	662000	High	Left	Tilt	NR Band n77	G	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.01	1:1	0.002	1.047	0.002	
3750.00	650000	Low	Right	Cheek	NR Band n77	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.19	1:1	0.006	1.365	0.008	
3750.00	650000	Low	Right	Tilt	NR Band n77	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.20	1:1	0.000	1.365	0.000	
3750.00	650000	Low	Left	Cheek	NR Band n77	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.07	1:1	0.000	1.365	0.000	
3750.00	650000	Low	Left	Tilt	NR Band n77	D	0107M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.05	1:1	0.000	1.365	0.000	
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 11-18
DTS Head SISO SAR

MEASUREMENT RESULTS																			
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	Right	Cheek	802.11b	DSSS	2	0436M	22	1	13.0	12.94	0.01	98.85	0.006	0.004	1.014	1.012	**0.004**	
2437	6	Right	Tilt	802.11b	DSSS	2	0436M	22	1	13.0	12.94	0.06	98.85	0.003	0.000	1.014	1.012	0.000	
2437	6	Left	Cheek	802.11b	DSSS	2	0436M	22	1	13.0	12.94	0.02	98.85	0.005	0.003	1.014	1.012	0.003	
2437	6	Left	Tilt	802.11b	DSSS	2	0436M	22	1	13.0	12.94	0.02	98.85	0.002	0.000	1.014	1.012	0.000	
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 11-19
DTS Head MIMO SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2437	6	Right	Cheek	802.11n	OFDM	MIMO	0436M	20	13	13.0	12.47	13.0	12.69	0.00	97.70	0.360	0.285	1.130	1.024	0.330	A19
2437	6	Right	Tilt	802.11n	OFDM	MIMO	0436M	20	13	13.0	12.47	13.0	12.69	-0.11	97.70	0.316	0.269	1.130	1.024	0.311	
2437	6	Left	Cheek	802.11n	OFDM	MIMO	0436M	20	13	13.0	12.47	13.0	12.69	0.09	97.70	0.207	0.158	1.130	1.024	0.183	
2437	6	Left	Tilt	802.11n	OFDM	MIMO	0436M	20	13	13.0	12.47	13.0	12.69	0.02	97.70	0.274	0.200	1.130	1.024	0.231	
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 16.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 13.0 dBm.

Table 11-20
NII MIMO Head SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5290	58	Right	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.32	12.0	10.95	0.09	92.82	0.263	0.165	1.274	1.077	0.226	
5290	58	Right	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.32	12.0	10.95	-0.01	92.82	0.405	0.218	1.274	1.077	0.299	
5290	58	Left	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.32	12.0	10.95	0.02	92.82	0.098	0.069	1.274	1.077	0.095	
5290	58	Left	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.32	12.0	10.95	0.01	92.82	0.142	0.095	1.274	1.077	0.130	
5530	106	Right	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.75	12.0	10.78	0.09	92.82	0.225	0.194	1.324	1.077	0.277	
5530	106	Right	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.75	12.0	10.78	-0.02	92.82	0.494	0.269	1.324	1.077	0.384	
5530	106	Left	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.75	12.0	10.78	0.06	92.82	0.136	0.091	1.324	1.077	0.130	
5530	106	Left	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.75	12.0	10.78	0.01	92.82	0.194	0.144	1.324	1.077	0.205	
5775	155	Right	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.59	12.0	10.74	0.05	92.82	0.298	0.177	1.337	1.077	0.255	
5775	155	Right	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.59	12.0	10.74	0.02	92.82	0.380	0.223	1.337	1.077	0.321	
5775	155	Left	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.59	12.0	10.74	-0.12	92.82	0.172	0.120	1.337	1.077	0.173	
5775	155	Left	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.59	12.0	10.74	-0.02	92.82	0.205	0.138	1.337	1.077	0.199	
5855	171	Right	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.80	12.0	10.76	0.00	92.82	0.369	0.222	1.330	1.077	0.318	
5855	171	Right	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.80	12.0	10.76	-0.02	92.82	0.494	0.309	1.330	1.077	**0.443**	A20
5855	171	Left	Cheek	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.80	12.0	10.76	0.13	92.82	0.165	0.102	1.330	1.077	0.146	
5855	171	Left	Tilt	802.11ac	OFDM	MIMO	0441M	80	58.5	12.0	11.80	12.0	10.76	0.04	92.82	0.222	0.142	1.330	1.077	0.203	
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 15.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 12.0 dBm.

Table 11-21
DSS Head SISO SAR

MEASUREMENT RESULTS																	
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	Right	Cheek	Bluetooth	FHSS	1	0436M	1	11.5	11.14	0.08	76.80	0.210	1.086	1.302	**0.297**	A21
2441	39	Right	Tilt	Bluetooth	FHSS	1	0436M	1	11.5	11.14	0.02	76.80	0.196	1.086	1.302	0.277	
2441	39	Left	Cheek	Bluetooth	FHSS	1	0436M	1	11.5	11.14	-0.06	76.80	0.104	1.086	1.302	0.147	
2441	39	Left	Tilt	Bluetooth	FHSS	1	0436M	1	11.5	11.14	-0.03	76.80	0.115	1.086	1.302	0.163	
2441	39	Right	Cheek	Bluetooth	FHSS	2	0436M	1	9.5	9.10	0.20	76.80	0.000	1.096	1.302	0.000	
2441	39	Right	Tilt	Bluetooth	FHSS	2	0436M	1	9.5	9.10	0.01	76.80	0.000	1.096	1.302	0.000	
2441	39	Left	Cheek	Bluetooth	FHSS	2	0436M	1	9.5	9.10	0.01	76.80	0.000	1.096	1.302	0.000	
2441	39	Left	Tilt	Bluetooth	FHSS	2	0436M	1	9.5	9.10	0.05	76.80	0.000	1.096	1.302	0.000	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**	**Head** **1.6 W/kg (mW/g)** averaged over 1 gram

11.2 Standalone Body-Worn SAR Data

Table 11-22
GSM Body-Worn SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	# of Time Slots	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
848.80	251	back	15 mm	GSM 850	GSM	A+B	0791M	1	33.0	31.88	-0.06	1:8.3	0.095	1.294	0.123	A22
848.80	251	back	15 mm	GSM 850	GSM	A	0791M	1	33.0	31.88	-0.01	1:8.3	0.093	1.294	0.120	
1909.80	810	back	15 mm	GSM 1900	GSM	B	0782M	1	30.5	29.53	0.00	1:8.3	0.142	1.250	0.178	A23

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 11-23
UMTS Body-Worn SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
826.40	4132	back	15 mm	UMTS 850	RMC	A+B	0791M	25.5	24.84	0.03	1:1	0.137	1.164	0.159	
826.40	4132	back	15 mm	UMTS 850	RMC	A	0791M	25.5	24.84	0.01	1:1	0.148	1.164	0.172	A24
1712.40	1312	back	15 mm	UMTS 1750	RMC	B	0432M	25.0	24.08	-0.06	1:1	0.747	1.236	**0.923**	A25
1732.40	1412	back	15 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	-0.03	1:1	0.661	1.222	0.808	
1752.60	1513	back	15 mm	UMTS 1750	RMC	B	0432M	25.0	24.07	0.03	1:1	0.558	1.239	0.691	
1852.40	9262	back	15 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	-0.03	1:1	0.402	1.135	0.456	A26

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 11-24
LTE Body-Worn SAR Data

MEASUREMENT RESULTS																							
Power Class	FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
	MHz	Ch.																	(W/kg)		(W/kg)	
N/A	707.50	23095	Mid	back	15 mm	LTE Band 12	A+B	54	0428M	10	QPSK	1	0	25.5	24.91	0	-0.09	1:1	0.219	1.146	0.251	A27
N/A	707.50	23095	Mid	back	15 mm	LTE Band 12	A+B	36	0428M	10	QPSK	25	12	24.5	23.80	1	0.04	1:1	0.158	1.175	0.186	
N/A	707.50	23095	Mid	back	15 mm	LTE Band 12	A	58	0428M	10	QPSK	1	0	25.5	24.91	0	-0.02	1:1	0.145	1.146	0.166	
N/A	707.50	23095	Mid	back	15 mm	LTE Band 12	A	58	0428M	10	QPSK	25	12	24.5	23.80	1	0.02	1:1	0.105	1.175	0.123	
N/A	782.00	23230	Mid	back	15 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	0.14	1:1	0.149	1.211	0.180	A28
N/A	782.00	23230	Mid	back	15 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	0.09	1:1	0.118	1.197	0.141	
N/A	782.00	23230	Mid	back	15 mm	LTE Band 13	A	18	0428M	10	QPSK	1	0	24.0	23.17	0	0.02	1:1	0.111	1.211	0.134	
N/A	782.00	23230	Mid	back	15 mm	LTE Band 13	A	9	0428M	10	QPSK	25	12	23.0	22.22	1	0.01	1:1	0.088	1.197	0.105	
N/A	831.50	26865	Mid	back	15 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	-0.08	1:1	0.109	1.245	0.136	A29
N/A	831.50	26865	Mid	back	15 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.00	1:1	0.093	1.346	0.125	
N/A	831.50	26865	Mid	back	15 mm	LTE Band 26 (Cell)	A	63	0791M	15	QPSK	1	0	25.5	24.55	0	0.02	1:1	0.103	1.245	0.128	
N/A	831.50	26865	Mid	back	15 mm	LTE Band 26 (Cell)	A	63	0791M	15	QPSK	36	37	24.5	23.21	1	0.01	1:1	0.088	1.346	0.118	
N/A	1745.00	132322	Mid	back	15 mm	LTE Band 66 (AWS)	B	N/A	0432M	20	QPSK	1	50	25.0	24.13	0	0.16	1:1	0.467	1.222	0.571	A30
N/A	1745.00	132322	Mid	back	15 mm	LTE Band 66 (AWS)	B	N/A	0432M	20	QPSK	50	25	24.0	22.87	1	0.02	1:1	0.381	1.297	0.494	
N/A	1770.00	132572	High	back	15 mm	LTE Band 66 (AWS)	F	N/A	0104M	20	QPSK	1	50	19.0	18.20	0	-0.05	1:1	0.122	1.202	0.147	
N/A	1770.00	132572	High	back	15 mm	LTE Band 66 (AWS)	F	N/A	0104M	20	QPSK	50	25	19.0	18.25	0	0.01	1:1	0.124	1.189	0.147	
N/A	1860.00	26140	Low	back	15 mm	LTE Band 25 (PCS)	B	N/A	0782M	20	QPSK	1	99	25.0	23.92	0	-0.03	1:1	0.368	1.282	0.472	A31
N/A	1860.00	26140	Low	back	15 mm	LTE Band 25 (PCS)	B	N/A	0782M	20	QPSK	50	0	24.0	22.78	1	0.01	1:1	0.291	1.324	0.385	
Power Class 3	2680.00	41490	High	back	15 mm	LTE Band 41	B	N/A	0782M	20	QPSK	1	50	23.0	21.84	0	0.00	1:1.58	0.279	1.306	0.364	A32
Power Class 3	2680.00	41490	High	back	15 mm	LTE Band 41	B	N/A	0782M	20	QPSK	50	50	23.0	21.87	0	-0.02	1:1.58	0.273	1.297	0.354	
Power Class 2	2680.00	41490	High	back	15 mm	LTE Band 41	B	N/A	0782M	20	QPSK	1	50	24.6	23.72	0	0.03	1:2.31	0.273	1.225	0.334	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-25
NR Body-Worn SAR

MEASUREMENT RESULTS																							
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Cover Type	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																			(W/kg)		(W/kg)	
707.50	141500	Mid	back	15 mm	NR Band n12	A+B	36	N/A	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.15	1:1	0.157	1.374	0.216	
707.50	141500	Mid	back	15 mm	NR Band n12	A+B	36	N/A	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.07	1:1	0.168	1.377	0.231	A33
707.50	141500	Mid	back	15 mm	NR Band n12	A+B	36	N/A	0337M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	0.04	1:1	0.118	1.445	0.171	
707.50	141500	Mid	back	15 mm	NR Band n12	A	45	N/A	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.00	1:1	0.114	1.374	0.157	
707.50	141500	Mid	back	15 mm	NR Band n12	A	45	N/A	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.01	1:1	0.119	1.377	0.164	
707.50	141500	Mid	back	15 mm	NR Band n12	A	45	N/A	0344M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	-0.02	1:1	0.076	1.445	0.110	
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A+B	108	N/A	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.03	1:1	0.109	1.222	0.133	
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A+B	108	N/A	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.112	1.230	0.138	A34
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A+B	108	N/A	0010M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.06	1:1	0.072	1.268	0.091	
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A	63	N/A	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.02	1:1	0.090	1.222	0.110	
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A	63	N/A	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.03	1:1	0.092	1.230	0.113	
836.50	167300	Mid	back	15 mm	NR Band n5 (Cell)	A	63	N/A	0344M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.01	1:1	0.054	1.268	0.068	
1720.00	344000	Low	back	15 mm	NR Band n66 (AWS)	B	N/A	N/A	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.00	1:1	0.477	1.076	0.513	A35
1720.00	344000	Low	back	15 mm	NR Band n66 (AWS)	B	N/A	N/A	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.04	1:1	0.474	1.233	0.584	
1720.00	344000	Low	back	15 mm	NR Band n66 (AWS)	B	N/A	N/A	0813M	20	CP-OFDM	QPSK	1	1	23.0	22.39	1.5	0.00	1:1	0.345	1.151	0.397	
1770.00	354000	High	back	15 mm	NR Band n66 (AWS)	F	N/A	N/A	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.02	1:1	0.105	1.135	0.119	
1770.00	354000	High	back	15 mm	NR Band n66 (AWS)	F	N/A	N/A	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.07	1:1	0.102	1.132	0.115	
1770.00	354000	High	back	15 mm	NR Band n66 (AWS)	F	N/A	N/A	0777M	20	CP-OFDM	QPSK	1	1	20.0	19.48	0	-0.02	1:1	0.111	1.127	0.125	
1860.00	372000	Low	back	15 mm	NR Band n25 (PCS)	B	N/A	N/A	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.02	1:1	0.245	1.303	0.319	
1860.00	372000	Low	back	15 mm	NR Band n25 (PCS)	B	N/A	N/A	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.03	1:1	0.262	1.265	0.331	A36
1860.00	372000	Low	back	15 mm	NR Band n25 (PCS)	B	N/A	N/A	0344M	20	CP-OFDM	QPSK	1	1	23.0	21.87	1.5	-0.02	1:1	0.183	1.297	0.237	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-26
NR Band 41 Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	back	15 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	-0.04	1:1	0.063	1.148	0.072	
2592.99	518598	Mid	back	15 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	0.06	1:1	0.065	1.156	0.075	
2592.99	518598	Mid	back	15 mm	NR Band n41	F	0820M	100	CP-OFDM	QPSK	1	1	19.0	18.20	0	0.13	1:1	0.069	1.202	0.083	A37
2592.99	518598	Mid	back	15 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.07	1:1	0.041	1.355	0.056	
2592.99	518598	Mid	back	15 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.02	1:1	0.008	1.253	0.010	
2592.99	518598	Mid	back	15 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.04	1:1	0.005	1.303	0.007	
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 11-27
NR Band 77 Body-Worn SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot "
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.03	1:1	0.144	1.109	0.160	A38
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.05	1:1	0.143	1.172	0.168	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	-0.12	1:1	0.136	1.216	0.165	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.11	1:1	0.050	1.282	0.064	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.19	1:1	0.047	1.285	0.060	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	16.79	0	0.11	1:1	0.050	1.321	0.066	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	NA	NA	16.0	14.30	N/A	0.08	1:1	0.006	1.479	0.009	
3500.01	633334	Mid	back	15 mm	NR Band n77 DoD	D	0646M	100	CW/SRS	N/A	NA	NA	16.0	15.77	N/A	0.09	1:1	0.026	1.054	0.027	
3930.00	662000	High	back	15 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.17	1:1	0.119	1.005	0.120	
3930.00	662000	High	back	15 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.01	1:1	0.197	1.019	0.201	
3930.00	662000	High	back	15 mm	NR Band n77	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	-0.04	1:1	0.207	1.161	0.240	A39
3930.00	662000	High	back	15 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.04	1:1	0.165	1.102	0.182	
3930.00	662000	High	back	15 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.06	1:1	0.163	1.127	0.184	
3930.00	662000	High	back	15 mm	NR Band n77	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	17.10	0	-0.08	1:1	0.151	1.230	0.186	
3930.00	662000	High	back	15 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	NA	NA	16.0	15.80	N/A	0.03	1:1	0.035	1.047	0.037	
3750.00	650000	Low	back	15 mm	NR Band n77	D	0010M	100	CW/SRS	N/A	NA	NA	16.0	14.65	N/A	0.17	1:1	0.018	1.365	0.025	
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 11-28
DTS SISO Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	back	15 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.16	98.85	0.028	0.023	1.000	1.012	**0.023**	
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 11-29
DTS MIMO Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	back	15 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.08	98.85	0.044	0.038	1.035	1.012	0.040	A40
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 22.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19.0 dBm.

Table 11-30
NII MIMO Body-Worn SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5260	52	back	15 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	0.03	97.92	0.025	0.016	1.107	1.021	**0.018**	
5720	144	back	15 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	0.12	97.92	0.046	0.015	1.096	1.021	**0.019**	
5825	165	back	15 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.02	97.92	0.040	0.019	1.069	1.021	**0.023**	A41
5845	169	back	15 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.06	97.92	0.030	0.019	1.086	1.021	**0.024**	
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 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

Table 11-31
DSS SISO Body-Worn SAR

MEASUREMENT RESULTS																	
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	back	15 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.04	76.80	0.020	1.183	1.302	**0.031**	A42
2441	39	back	15 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	0.01	76.80	0.010	1.042	1.302	0.014	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										Body 1.6 W/kg (mW/g) averaged over 1 gram							

11.3 Standalone Hotspot SAR Data

Table 11-32
GPRS Hotspot SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	# of Time Slots	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
824.20	128	back	10 mm	GSM 850	GPRS	A+B	0791M	3	30.5	30.10	-0.07	1:2.76	0.239	1.096	0.262	
824.20	128	front	10 mm	GSM 850	GPRS	A+B	0791M	3	30.5	30.10	0.01	1:2.76	0.073	1.096	0.080	
824.20	128	bottom	10 mm	GSM 850	GPRS	A+B	0791M	3	30.5	30.10	0.04	1:2.76	0.074	1.096	0.081	
824.20	128	right	10 mm	GSM 850	GPRS	A+B	0791M	3	30.5	30.10	0.05	1:2.76	0.151	1.096	0.165	
824.20	128	left	10 mm	GSM 850	GPRS	A+B	0791M	3	30.5	30.10	-0.07	1:2.76	0.068	1.096	0.075	
824.20	128	back	10 mm	GSM 850	GPRS	A	0791M	3	30.5	30.10	0.03	1:2.76	0.246	1.096	0.270	A43
824.20	128	front	10 mm	GSM 850	GPRS	A	0791M	3	30.5	30.10	0.00	1:2.76	0.066	1.096	0.072	
824.20	128	bottom	10 mm	GSM 850	GPRS	A	0791M	3	30.5	30.10	-0.04	1:2.76	0.093	1.096	0.102	
824.20	128	right	10 mm	GSM 850	GPRS	A	0791M	3	30.5	30.10	0.08	1:2.76	0.162	1.096	0.178	
1909.80	810	back	10 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	-0.04	1:2.076	0.118	1.242	0.147	
1909.80	810	front	10 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	-0.17	1:2.076	0.049	1.242	0.061	
1909.80	810	bottom	10 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	-0.04	1:2.076	0.281	1.242	0.349	A44
1909.80	810	right	10 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	0.08	1:2.076	0.039	1.242	0.048	
1909.80	810	left	10 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	0.03	1:2.076	0.017	1.242	0.021	
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 11-33
UMTS Hotspot SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Tune State	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
826.40	4132	back	10 mm	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.01	1:1	0.269	1.164	0.313	
826.40	4132	front	10 mm	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.09	1:1	0.085	1.164	0.099	
826.40	4132	bottom	10 mm	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.02	1:1	0.070	1.164	0.081	
826.40	4132	right	10 mm	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.04	1:1	0.185	1.164	0.215	
826.40	4132	left	10 mm	UMTS 850	RMC	A+B	108	0791M	25.5	24.84	0.01	1:1	0.066	1.164	0.077	
826.40	4132	back	10 mm	UMTS 850	RMC	A	9	0791M	25.5	24.84	0.02	1:1	0.289	1.164	0.336	A45
826.40	4132	front	10 mm	UMTS 850	RMC	A	9	0791M	25.5	24.84	-0.12	1:1	0.060	1.164	0.070	
826.40	4132	bottom	10 mm	UMTS 850	RMC	A	9	0791M	25.5	24.84	0.05	1:1	0.069	1.164	0.080	
826.40	4132	right	10 mm	UMTS 850	RMC	A	9	0791M	25.5	24.84	0.02	1:1	0.168	1.164	0.196	
1712.40	1312	back	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.22	0.06	1:1	0.412	1.197	0.493	
1712.40	1312	front	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.22	-0.03	1:1	0.126	1.197	0.151	
1712.40	1312	bottom	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.22	0.00	1:1	0.588	1.197	0.704	A46
1732.40	1412	bottom	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.16	-0.01	1:1	0.539	1.213	0.654	
1752.60	1513	bottom	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.20	0.00	1:1	0.451	1.202	0.542	
1712.40	1312	right	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.22	-0.01	1:1	0.119	1.197	0.142	
1712.40	1312	left	10 mm	UMTS 1750	RMC	B	N/A	0432M	19.0	18.22	-0.02	1:1	0.055	1.197	0.066	
1852.40	9262	back	10 mm	UMTS 1900	RMC	B	N/A	0782M	19.0	18.15	0.01	1:1	0.217	1.216	0.264	
1852.40	9262	front	10 mm	UMTS 1900	RMC	B	N/A	0782M	19.0	18.15	-0.12	1:1	0.077	1.216	0.094	
1852.40	9262	bottom	10 mm	UMTS 1900	RMC	B	N/A	0782M	19.0	18.15	-0.04	1:1	0.374	1.216	0.455	A47
1852.40	9262	right	10 mm	UMTS 1900	RMC	B	N/A	0782M	19.0	18.15	-0.06	1:1	0.054	1.216	0.066	
1852.40	9262	left	10 mm	UMTS 1900	RMC	B	N/A	0782M	19.0	18.15	0.00	1:1	0.033	1.216	0.040	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram							

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Table 11-34
LTE Band 12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	back	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	1	0	25.5	24.91	0	-0.02	1:1	0.311	1.146	0.356	
707.50	23095	Mid	back	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	25	12	24.5	23.80	1	-0.01	1:1	0.240	1.175	0.282	
707.50	23095	Mid	front	10 mm	LTE Band 12	A+B	54	0428M	10	QPSK	1	0	25.5	24.91	0	0.00	1:1	0.150	1.146	0.172	
707.50	23095	Mid	front	10 mm	LTE Band 12	A+B	54	0428M	10	QPSK	25	12	24.5	23.80	1	0.05	1:1	0.116	1.175	0.136	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A+B	108	0428M	10	QPSK	1	0	25.5	24.91	0	0.15	1:1	0.090	1.146	0.103	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A+B	108	0428M	10	QPSK	25	12	24.5	23.80	1	0.02	1:1	0.062	1.175	0.073	
707.50	23095	Mid	right	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	1	0	25.5	24.91	0	0.06	1:1	0.349	1.146	0.400	A48
707.50	23095	Mid	right	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	25	12	24.5	23.80	1	0.04	1:1	0.246	1.175	0.289	
707.50	23095	Mid	left	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	1	0	25.5	24.91	0	-0.03	1:1	0.146	1.146	0.167	
707.50	23095	Mid	left	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	25	12	24.5	23.80	1	-0.07	1:1	0.111	1.175	0.130	
707.50	23095	Mid	back	10 mm	LTE Band 12	A	10	0428M	10	QPSK	1	0	25.5	24.91	0	-0.05	1:1	0.205	1.146	0.235	
707.50	23095	Mid	back	10 mm	LTE Band 12	A	10	0428M	10	QPSK	25	12	24.5	23.80	1	-0.07	1:1	0.158	1.175	0.186	
707.50	23095	Mid	front	10 mm	LTE Band 12	A	58	0428M	10	QPSK	1	0	25.5	24.91	0	0.18	1:1	0.099	1.146	0.113	
707.50	23095	Mid	front	10 mm	LTE Band 12	A	58	0428M	10	QPSK	25	12	24.5	23.80	1	0.00	1:1	0.076	1.175	0.089	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A	46	0428M	10	QPSK	1	0	25.5	24.91	0	0.02	1:1	0.081	1.146	0.093	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A	46	0428M	10	QPSK	25	12	24.5	23.80	1	0.11	1:1	0.061	1.175	0.072	
707.50	23095	Mid	right	10 mm	LTE Band 12	A	58	0428M	10	QPSK	1	0	25.5	24.91	0	-0.01	1:1	0.252	1.146	0.289	
707.50	23095	Mid	right	10 mm	LTE Band 12	A	58	0428M	10	QPSK	25	12	24.5	23.80	1	-0.02	1:1	0.187	1.175	0.220	
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 11-35
LTE Band 13 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	back	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	-0.07	1:1	0.230	1.211	0.279	A49
782.00	23230	Mid	back	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	-0.07	1:1	0.183	1.197	0.219	
782.00	23230	Mid	front	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	-0.08	1:1	0.128	1.211	0.155	
782.00	23230	Mid	front	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	0.07	1:1	0.100	1.197	0.120	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A+B	1	0428M	10	QPSK	1	0	24.0	23.17	0	0.01	1:1	0.060	1.211	0.073	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A+B	1	0428M	10	QPSK	25	12	23.0	22.22	1	0.03	1:1	0.049	1.197	0.059	
782.00	23230	Mid	right	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	0.14	1:1	0.204	1.211	0.247	
782.00	23230	Mid	right	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	-0.02	1:1	0.173	1.197	0.207	
782.00	23230	Mid	left	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	-0.11	1:1	0.091	1.211	0.110	
782.00	23230	Mid	left	10 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	0.08	1:1	0.069	1.197	0.083	
782.00	23230	Mid	back	10 mm	LTE Band 13	A	9	0428M	10	QPSK	1	0	24.0	23.17	0	-0.08	1:1	0.206	1.211	0.249	
782.00	23230	Mid	back	10 mm	LTE Band 13	A	9	0428M	10	QPSK	25	12	23.0	22.22	1	-0.03	1:1	0.164	1.197	0.196	
782.00	23230	Mid	front	10 mm	LTE Band 13	A	9	0428M	10	QPSK	1	0	24.0	23.17	0	0.08	1:1	0.108	1.211	0.131	
782.00	23230	Mid	front	10 mm	LTE Band 13	A	9	0428M	10	QPSK	25	12	23.0	22.22	1	0.08	1:1	0.086	1.197	0.103	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A	9	0428M	10	QPSK	1	0	24.0	23.17	0	0.00	1:1	0.098	1.211	0.119	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A	9	0428M	10	QPSK	25	12	23.0	22.22	1	-0.01	1:1	0.080	1.197	0.096	
782.00	23230	Mid	right	10 mm	LTE Band 13	A	9	0428M	10	QPSK	1	0	24.0	23.17	0	0.07	1:1	0.209	1.211	0.253	
782.00	23230	Mid	right	10 mm	LTE Band 13	A	9	0428M	10	QPSK	25	12	23.0	22.22	1	0.01	1:1	0.166	1.197	0.199	
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 11-36
LTE Band 26 (Cell) Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.00	1:1	0.229	1.245	0.285	A50
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	-0.01	1:1	0.194	1.346	0.261	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.00	1:1	0.122	1.245	0.152	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.09	1:1	0.084	1.346	0.113	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.09	1:1	0.053	1.245	0.066	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.06	1:1	0.039	1.346	0.052	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.03	1:1	0.195	1.245	0.243	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.01	1:1	0.150	1.346	0.202	
831.50	26865	Mid	left	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	1	0	25.5	24.55	0	0.04	1:1	0.084	1.245	0.105	
831.50	26865	Mid	left	10 mm	LTE Band 26 (Cell)	A+B	108	0791M	15	QPSK	36	37	24.5	23.21	1	0.04	1:1	0.057	1.346	0.077	
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	0.05	1:1	0.223	1.245	0.278	
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	0.06	1:1	0.190	1.346	0.256	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A	63	0791M	15	QPSK	1	0	25.5	24.55	0	0.05	1:1	0.079	1.245	0.098	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A	63	0791M	15	QPSK	36	37	24.5	23.21	1	0.04	1:1	0.054	1.346	0.073	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	1	0	25.5	24.55	0	0.05	1:1	0.082	1.245	0.102	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A	9	0791M	15	QPSK	36	37	24.5	23.21	1	0.05	1:1	0.057	1.346	0.077	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A	0	0791M	15	QPSK	1	0	25.5	24.55	0	0.04	1:1	0.196	1.245	0.244	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A	0	0791M	15	QPSK	36	37	24.5	23.21	1	0.02	1:1	0.139	1.346	0.187	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-37
LTE Band 66 (AWS) Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	0.02	1:1	0.270	1.213	0.328	
1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.04	1:1	0.264	1.245	0.329	
1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	-0.03	1:1	0.107	1.213	0.130	
1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.01	1:1	0.106	1.245	0.132	
1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	0.01	1:1	0.467	1.213	0.566	
1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.01	1:1	0.463	1.245	0.576	
1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	0.00	1:1	0.100	1.213	0.121	
1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.05	1:1	0.099	1.245	0.123	
1745.00	132322	Mid	left	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	0.02	1:1	0.042	1.213	0.051	
1745.00	132322	Mid	left	10 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.03	1:1	0.042	1.245	0.052	
1770.00	132572	High	back	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	18.20	0	-0.02	1:1	0.250	1.202	0.301	
1770.00	132572	High	back	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	18.25	0	0.01	1:1	0.253	1.189	0.301	
1770.00	132572	High	front	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	18.20	0	-0.02	1:1	0.077	1.202	0.093	
1770.00	132572	High	front	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	18.25	0	0.01	1:1	0.080	1.189	0.095	
1770.00	132572	High	top	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	18.20	0	-0.02	1:1	0.496	1.202	0.596	
1720.00	132072	Low	top	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	17.94	0	-0.01	1:1	0.558	1.276	**0.712**	A51
1745.00	132322	Mid	top	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	17.99	0	-0.02	1:1	0.527	1.262	0.665	
1770.00	132572	High	top	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	18.25	0	-0.01	1:1	0.509	1.189	0.605	
1770.00	132572	High	left	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	18.20	0	-0.18	1:1	0.074	1.202	0.089	
1770.00	132572	High	left	10 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	18.25	0	0.01	1:1	0.075	1.189	0.089	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-38
LTE Band 25 (PCS) Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	0.03	1:1	0.214	1.250	0.268	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.01	1:1	0.215	1.309	0.281	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	0.01	1:1	0.094	1.250	0.118	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.01	1:1	0.089	1.309	0.117	
1882.50	26365	Mid	bottom	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	-0.04	1:1	0.479	1.250	0.599	A52
1882.50	26365	Mid	bottom	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.01	1:1	0.444	1.309	0.581	
1882.50	26365	Mid	right	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	-0.04	1:1	0.064	1.250	0.080	
1882.50	26365	Mid	right	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.02	1:1	0.065	1.309	0.085	
1882.50	26365	Mid	left	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	-0.11	1:1	0.042	1.250	0.053	
1882.50	26365	Mid	left	10 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.12	1:1	0.036	1.309	0.047	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-39
LTE Band 41 Hotspot SAR

MEASUREMENT RESULTS																				
Power Class	FREQUENCY			Side	Spacing	Mode	Antenna Config.	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
	MHz	Ch.															(W/kg)		(W/kg)	
Power Class 3	2680.00	41490	High	back	10 mm	LTE Band 41	B	20	QPSK	1	50	18.5	18.08	0	0.03	1:1.58	0.204	1.102	0.225	
Power Class 3	2680.00	41490	High	back	10 mm	LTE Band 41	B	20	QPSK	50	50	18.5	17.91	0	0.01	1:1.58	0.202	1.146	0.231	
Power Class 3	2680.00	41490	High	front	10 mm	LTE Band 41	B	20	QPSK	1	50	18.5	18.08	0	-0.07	1:1.58	0.080	1.102	0.088	
Power Class 3	2680.00	41490	High	front	10 mm	LTE Band 41	B	20	QPSK	50	50	18.5	17.91	0	0.04	1:1.58	0.080	1.146	0.092	
Power Class 3	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	20	QPSK	1	50	18.5	18.08	0	-0.03	1:1.58	0.378	1.102	0.417	A53
Power Class 3	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	20	QPSK	50	50	18.5	17.91	0	0.01	1:1.58	0.373	1.146	0.427	
Power Class 2	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	20	QPSK	50	50	20.1	19.60	0	-0.02	1:2.31	0.343	1.122	0.385	
Power Class 3	2680.00	41490	High	right	10 mm	LTE Band 41	B	20	QPSK	1	50	18.5	18.08	0	0.02	1:1.58	0.073	1.102	0.080	
Power Class 3	2680.00	41490	High	right	10 mm	LTE Band 41	B	20	QPSK	50	50	18.5	17.91	0	-0.05	1:1.58	0.066	1.146	0.076	
Power Class 3	2680.00	41490	High	left	10 mm	LTE Band 41	B	20	QPSK	1	50	18.5	18.08	0	0.04	1:1.58	0.018	1.102	0.020	
Power Class 3	2680.00	41490	High	left	10 mm	LTE Band 41	B	20	QPSK	50	50	18.5	17.91	0	0.07	1:1.58	0.018	1.146	0.021	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	Body
Spatial Peak	1.6 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 1 gram

Table 11-40
NR Band n12 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
707.50	141500	Mid	back	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.02	1:1	0.237	1.374	0.326	
707.50	141500	Mid	back	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.02	1:1	0.250	1.377	0.344	A54
707.50	141500	Mid	back	10 mm	NR Band n12	A+B	37	0337M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	-0.01	1:1	0.140	1.445	0.202	
707.50	141500	Mid	front	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.01	1:1	0.110	1.374	0.151	
707.50	141500	Mid	front	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.03	1:1	0.115	1.377	0.158	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.02	1:1	0.058	1.374	0.080	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.04	1:1	0.061	1.377	0.084	
707.50	141500	Mid	right	10 mm	NR Band n12	A+B	37	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.01	1:1	0.216	1.374	0.297	
707.50	141500	Mid	right	10 mm	NR Band n12	A+B	37	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.02	1:1	0.236	1.377	0.325	
707.50	141500	Mid	left	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.01	1:1	0.115	1.374	0.158	
707.50	141500	Mid	left	10 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.04	1:1	0.115	1.377	0.158	
707.50	141500	Mid	back	10 mm	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.01	1:1	0.188	1.374	0.258	
707.50	141500	Mid	back	10 mm	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.03	1:1	0.177	1.377	0.244	
707.50	141500	Mid	front	10 mm	NR Band n12	A	10	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.03	1:1	0.081	1.374	0.111	
707.50	141500	Mid	front	10 mm	NR Band n12	A	10	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.05	1:1	0.086	1.377	0.118	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.10	1:1	0.066	1.374	0.091	
707.50	141500	Mid	bottom	10 mm	NR Band n12	A	45	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.01	1:1	0.068	1.377	0.094	
707.50	141500	Mid	right	10 mm	NR Band n12	A	10	0344M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.01	1:1	0.197	1.374	0.271	
707.50	141500	Mid	right	10 mm	NR Band n12	A	10	0344M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.02	1:1	0.206	1.377	0.284	
707.50	141500	Mid	right	10 mm	NR Band n12	A	10	0344M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	0.02	1:1	0.143	1.445	0.207	
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 11-41
NR Band n5 Hotspot SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.00	1:1	0.191	1.222	0.233	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.200	1.230	0.246	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.02	1:1	0.101	1.222	0.123	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.109	1.230	0.134	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.03	1:1	0.046	1.222	0.056	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.02	1:1	0.049	1.230	0.060	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.02	1:1	0.204	1.222	0.249	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.02	1:1	0.217	1.230	0.267	A55
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.15	1:1	0.151	1.268	0.191	
836.50	167300	Mid	left	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.08	1:1	0.093	1.222	0.114	
836.50	167300	Mid	left	10 mm	NR Band n5 (Cell)	A+B	108	0010M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.02	1:1	0.097	1.230	0.119	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A	45	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.03	1:1	0.188	1.222	0.230	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A	45	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.01	1:1	0.196	1.230	0.241	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A	45	0344M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	0.01	1:1	0.118	1.268	0.150	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.02	1:1	0.075	1.222	0.092	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.03	1:1	0.079	1.230	0.097	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.02	1:1	0.072	1.222	0.088	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.06	1:1	0.074	1.230	0.091	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.05	1:1	0.184	1.222	0.225	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A	9	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.194	1.230	0.239	
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 11-42
NR Band n66 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1745.00	349000	Mid	back	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.04	1:1	0.230	1.023	0.235	
1745.00	349000	Mid	back	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	0.02	1:1	0.241	1.012	0.244	
1745.00	349000	Mid	front	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	-0.01	1:1	0.069	1.023	0.071	
1745.00	349000	Mid	front	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.01	1:1	0.075	1.012	0.076	
1745.00	349000	Mid	bottom	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.05	1:1	0.395	1.023	0.404	
1745.00	349000	Mid	bottom	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.01	1:1	0.417	1.012	0.422	
1745.00	349000	Mid	bottom	10 mm	NR Band n66 (AWS)	B	0813M	20	CP-OFDM	QPSK	1	1	19.0	18.90	0	0.00	1:1	0.424	1.023	0.434	
1745.00	349000	Mid	right	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.09	1:1	0.067	1.023	0.069	
1745.00	349000	Mid	right	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	0.04	1:1	0.070	1.012	0.071	
1745.00	349000	Mid	left	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	-0.05	1:1	0.033	1.023	0.034	
1745.00	349000	Mid	left	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.13	1:1	0.035	1.012	0.035	
1770.00	354000	High	back	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	0.03	1:1	0.197	1.135	0.224	
1770.00	354000	High	back	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.01	1:1	0.202	1.132	0.229	
1770.00	354000	High	front	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	0.03	1:1	0.079	1.135	0.090	
1770.00	354000	High	front	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	0.07	1:1	0.083	1.132	0.094	
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	0.00	1:1	0.456	1.135	0.518	
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.02	1:1	0.477	1.132	0.540	
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	CP-OFDM	QPSK	1	1	20.0	19.48	0	0.09	1:1	0.523	1.127	0.589	A56
1770.00	354000	High	left	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	0.00	1:1	0.070	1.135	0.079	
1770.00	354000	High	left	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.03	1:1	0.072	1.132	0.082	
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 11-43
NR Band n25 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1905.00	381000	High	back	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.03	1:1	0.190	1.219	0.232	
1905.00	381000	High	back	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.00	1:1	0.190	1.205	0.229	
1905.00	381000	High	front	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.01	1:1	0.092	1.219	0.112	
1905.00	381000	High	front	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.04	1:1	0.092	1.205	0.111	
1905.00	381000	High	bottom	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.02	1:1	0.419	1.219	0.511	
1905.00	381000	High	bottom	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.03	1:1	0.421	1.205	0.507	
1905.00	381000	High	bottom	10 mm	NR Band n25 (PCS)	B	0344M	20	CP-OFDM	QPSK	1	1	19.0	18.04	0	-0.02	1:1	0.423	1.247	0.527	A57
1905.00	381000	High	right	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.07	1:1	0.063	1.219	0.077	
1905.00	381000	High	right	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.01	1:1	0.058	1.205	0.070	
1905.00	381000	High	left	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.00	1:1	0.039	1.219	0.048	
1905.00	381000	High	left	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.04	1:1	0.039	1.205	0.047	
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 11-44
NR Band n41 Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	back	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.00	1:1	0.138	1.148	0.158	
2592.99	518598	Mid	back	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	0.02	1:1	0.143	1.156	0.165	
2592.99	518598	Mid	front	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.14	1:1	0.056	1.148	0.064	
2592.99	518598	Mid	front	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	0.057	1.156	0.066	
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	-0.03	1:1	0.218	1.148	0.250	A58
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	0.02	1:1	0.190	1.156	0.220	
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0820M	100	CP-OFDM	QPSK	1	1	19.0	18.20	0	-0.06	1:1	0.197	1.202	0.237	
2592.99	518598	Mid	left	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.03	1:1	0.046	1.148	0.053	
2592.99	518598	Mid	left	10 mm	NR Band n41	F	0820M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.03	1:1	0.045	1.156	0.052	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.02	1:1	0.089	1.355	0.121	
2592.99	518598	Mid	front	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.04	1:1	0.045	1.355	0.061	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.03	1:1	0.210	1.355	0.285	
2592.99	518598	Mid	right	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.09	1:1	0.037	1.355	0.050	
2592.99	518598	Mid	left	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.04	1:1	0.011	1.355	0.015	
2592.99	518598	Mid	back	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.01	1:1	0.016	1.253	0.020	
2592.99	518598	Mid	front	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.07	1:1	0.002	1.253	0.003	
2592.99	518598	Mid	top	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	-0.16	1:1	0.004	1.253	0.005	
2592.99	518598	Mid	right	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	-0.09	1:1	0.008	1.253	0.010	
2592.99	518598	Mid	back	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.09	1:1	0.009	1.303	0.012	
2592.99	518598	Mid	front	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.02	1:1	0.000	1.303	0.000	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	-0.13	1:1	0.012	1.303	0.016	
2592.99	518598	Mid	left	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.03	1:1	0.002	1.303	0.003	
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 11-45
NR Band n77 Hotspot SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.04	1:1	0.390	1.109	0.433	A59
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.06	1:1	0.388	1.172	0.455	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	-0.10	1:1	0.324	1.216	0.394	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.08	1:1	0.079	1.109	0.088	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.02	1:1	0.080	1.172	0.094	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.06	1:1	0.130	1.109	0.144	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.03	1:1	0.131	1.172	0.154	
3500.01	633334	Mid	left	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.11	1:1	0.093	1.109	0.103	
3500.01	633334	Mid	left	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.10	1:1	0.092	1.172	0.108	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.01	1:1	0.095	1.282	0.122	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.06	1:1	0.086	1.285	0.111	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.01	1:1	0.060	1.282	0.077	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.06	1:1	0.051	1.285	0.066	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.07	1:1	0.170	1.282	0.218	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.00	1:1	0.150	1.285	0.193	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	16.79	0	-0.01	1:1	0.167	1.321	0.221	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.13	1:1	0.117	1.282	0.150	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.03	1:1	0.107	1.285	0.137	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	-0.19	1:1	0.012	1.479	0.018	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.20	1:1	0.005	1.479	0.007	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	-0.03	1:1	0.033	1.479	0.049	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.08	1:1	0.000	1.479	0.000	
3500.01	633334	Mid	left	10 mm	NR Band n77 DoD	G	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.09	1:1	0.000	1.479	0.000	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	D	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.06	1:1	0.046	1.054	0.048	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	D	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.06	1:1	0.006	1.054	0.006	
3500.01	633334	Mid	bottom	10 mm	NR Band n77 DoD	D	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	-0.03	1:1	0.092	1.054	0.097	
3500.01	633334	Mid	left	10 mm	NR Band n77 DoD	D	0646M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.06	1:1	0.000	1.054	0.000	
3930.00	662000	High	back	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.01	1:1	0.327	1.005	0.329	
3930.00	662000	High	back	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.04	1:1	0.384	1.019	0.391	
3930.00	662000	High	back	10 mm	NR Band n77	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	0.01	1:1	0.319	1.161	0.370	
3930.00	662000	High	front	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.10	1:1	0.096	1.005	0.096	
3930.00	662000	High	front	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.12	1:1	0.072	1.019	0.073	
3930.00	662000	High	top	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.01	1:1	0.358	1.005	0.360	
3930.00	662000	High	top	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.00	1:1	0.289	1.019	0.294	
3930.00	662000	High	left	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.02	1:1	0.079	1.005	0.079	
3930.00	662000	High	left	10 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.21	1:1	0.074	1.019	0.075	
3930.00	662000	High	back	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.02	1:1	0.263	1.102	0.290	
3930.00	662000	High	back	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.01	1:1	0.266	1.127	0.300	
3930.00	662000	High	front	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.21	1:1	0.067	1.102	0.074	
3930.00	662000	High	front	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.07	1:1	0.067	1.127	0.076	
3750.00	650000	Low	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.12	0	0.01	1:1	0.288	1.225	0.353	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.02	1:1	0.558	1.102	0.615	A60
3750.00	650000	Low	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	138	18.0	17.00	0	-0.03	1:1	0.314	1.259	0.395	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.05	1:1	0.546	1.127	0.615	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	270	0	18.0	17.39	0	0.00	1:1	0.527	1.151	0.607	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	17.10	0	-0.04	1:1	0.496	1.230	0.610	
3930.00	662000	High	right	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.15	1:1	0.143	1.102	0.158	
3930.00	662000	High	right	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.04	1:1	0.143	1.127	0.161	
3930.00	662000	High	back	10 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.02	1:1	0.148	1.047	0.155	
3930.00	662000	High	front	10 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.04	1:1	0.001	1.047	0.001	
3930.00	662000	High	top	10 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	-0.17	1:1	0.066	1.047	0.069	
3930.00	662000	High	right	10 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.02	1:1	0.008	1.047	0.008	
3930.00	662000	High	left	10 mm	NR Band n77	G	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.03	1:1	0.000	1.047	0.000	
3750.00	650000	Low	back	10 mm	NR Band n77	D	0010M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.15	1:1	0.038	1.365	0.052	
3750.00	650000	Low	front	10 mm	NR Band n77	D	0010M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.20	1:1	0.005	1.365	0.007	
3750.00	650000	Low	bottom	10 mm	NR Band n77	D	0010M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	-0.13	1:1	0.042	1.365	0.057	
3750.00	650000	Low	left	10 mm	NR Band n77	D	0010M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	-0.14	1:1	0.009	1.365	0.012	
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 11-46
DTS SISO WLAN Hotspot SAR

MEASUREMENT RESULTS																			
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	back	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.06	98.85	0.021	0.039	1.000	1.012	0.039	
2412	1	front	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.17	98.85	0.106	0.088	1.000	1.012	0.089	
2412	1	bottom	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	0.00	98.85	0.233	0.177	1.000	1.012	**0.179**	
2412	1	left	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	0.08	98.85	0.047	0.037	1.000	1.012	0.037	
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 11-47
MIMO WLAN Hotspot SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	back	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.11	98.85	0.067	0.056	1.035	1.012	0.059	
2412	1	front	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	0.00	98.85	0.413	0.314	1.035	1.012	0.329	
2412	1	top	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.10	98.85	0.433	0.328	1.035	1.012	0.344	A61
2412	1	bottom	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.01	98.85	0.151	0.114	1.035	1.012	0.119	
2412	1	left	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.03	98.85	0.128	0.103	1.035	1.012	0.108	
5825	165	back	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.06	97.92	0.061	0.030	1.069	1.021	0.037	
5825	165	front	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.02	97.92	0.199	0.142	1.069	1.021	0.174	
5825	165	top	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.10	97.92	0.253	0.171	1.069	1.021	**0.210**	A62
5825	165	bottom	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.06	97.92	0.144	0.095	1.069	1.021	0.117	
5825	165	left	10 mm	802.11n	OFDM	MIMO	0414M	20	13	18.0	17.71	18.0	17.20	0.07	97.92	0.050	0.036	1.069	1.021	0.044	
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 22.0 dBm maximum allowed 2.4 GHz WLAN MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19.0 dBm

To achieve the 21.0 dBm maximum allowed 5 GHz MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm

Table 11-48
DSS Hotspot SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	back	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	-0.05	76.80	0.027	1.183	1.302	0.042	
2441	39	front	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.00	76.80	0.138	1.183	1.302	0.213	
2441	39	top	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	-0.03	76.80	0.171	1.183	1.302	**0.263**	A63
2441	39	left	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.04	76.80	0.054	1.183	1.302	0.083	
2441	39	back	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.08	76.80	0.015	1.042	1.302	0.020	
2441	39	front	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.02	76.80	0.041	1.042	1.302	0.056	
2441	39	bottom	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.02	76.80	0.071	1.042	1.302	0.096	
2441	39	left	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	0.00	76.80	0.012	1.042	1.302	0.016	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**										**Body** **1.6 W/kg (mW/g)** averaged over 1 gram							

11.4 Standalone Phablet SAR Data

Table 11-49
GSM 1900 Phablet SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	# of Time Slots	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
1909.80	810	back	12 mm	GSM 1900	GPRS	B	0782M	3	27.5	25.89	-0.05	1:2.76	0.182	1.449	0.264	
1909.80	810	front	0 mm	GSM 1900	GPRS	B	0782M	3	27.5	25.89	0.05	1:2.76	0.686	1.449	0.994	
1909.80	810	bottom	14 mm	GSM 1900	GPRS	B	0782M	3	27.5	25.89	-0.03	1:2.76	0.257	1.449	0.372	
1909.80	810	right	0 mm	GSM 1900	GPRS	B	0782M	3	27.5	25.89	0.03	1:2.76	0.407	1.449	0.590	
1909.80	810	left	0 mm	GSM 1900	GPRS	B	0782M	3	27.5	25.89	-0.05	1:2.76	0.098	1.449	0.142	
1909.80	810	back	0 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	0.04	1:2.076	0.516	1.242	0.641	
1909.80	810	bottom	0 mm	GSM 1900	GPRS	B	0782M	4	21.0	20.06	-0.04	1:2.076	0.798	1.242	0.991	A64
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 11-50
UMTS Phablet SAR Data

MEASUREMENT RESULTS															
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.											(W/kg)		(W/kg)	
1732.40	1412	back	12 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	0.02	1:1	0.540	1.222	0.660	
1732.40	1412	front	0 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	-0.04	1:1	1.300	1.222	1.589	
1732.40	1412	bottom	14 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	0.04	1:1	0.644	1.222	0.787	
1732.40	1412	right	0 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	0.03	1:1	1.060	1.222	1.295	
1732.40	1412	left	0 mm	UMTS 1750	RMC	B	0432M	25.0	24.13	-0.01	1:1	0.263	1.222	0.321	
1712.40	1312	back	0 mm	UMTS 1750	RMC	B	0432M	19.0	18.22	0.02	1:1	1.350	1.197	1.616	
1712.40	1312	bottom	0 mm	UMTS 1750	RMC	B	0432M	19.0	18.22	0.02	1:1	1.580	1.197	1.891	A65
1732.40	1412	bottom	0 mm	UMTS 1750	RMC	B	0432M	19.0	18.16	-0.03	1:1	1.360	1.213	1.650	
1752.60	1513	bottom	0 mm	UMTS 1750	RMC	B	0432M	19.0	18.20	-0.03	1:1	1.150	1.202	1.382	
1852.40	9262	back	12 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	0.03	1:1	0.378	1.135	0.429	
1852.40	9262	front	0 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	0.00	1:1	0.852	1.135	0.967	
1852.40	9262	bottom	14 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	0.00	1:1	0.403	1.135	0.457	
1852.40	9262	right	0 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	0.02	1:1	0.538	1.135	0.611	
1852.40	9262	left	0 mm	UMTS 1900	RMC	B	0782M	25.0	24.45	-0.07	1:1	0.130	1.135	0.148	
1852.40	9262	back	0 mm	UMTS 1900	RMC	B	0782M	19.0	18.15	0.01	1:1	0.718	1.216	0.873	
1852.40	9262	bottom	0 mm	UMTS 1900	RMC	B	0782M	19.0	18.15	-0.02	1:1	1.530	1.216	1.860	A66
1880.00	9400	bottom	0 mm	UMTS 1900	RMC	B	0782M	19.0	18.02	-0.03	1:1	1.480	1.253	1.854	
1907.60	9538	bottom	0 mm	UMTS 1900	RMC	B	0782M	19.0	18.06	0.00	1:1	1.510	1.242	1.875	
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 11-51
LTE Band 66 (AWS) Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	back	12 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	25.0	24.13	0	0.03	1:1	0.508	1.222	0.621	
1745.00	132322	Mid	back	12 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	24.0	22.87	1	-0.01	1:1	0.400	1.297	0.519	
1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	25.0	24.13	0	0.06	1:1	1.210	1.222	1.479	
1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	24.0	22.87	1	-0.02	1:1	0.984	1.297	1.276	
1745.00	132322	Mid	bottom	14 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	25.0	24.13	0	-0.02	1:1	0.576	1.222	0.704	
1745.00	132322	Mid	bottom	14 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	24.0	22.87	1	-0.01	1:1	0.453	1.297	0.588	
1745.00	132322	Mid	right	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	25.0	24.13	0	-0.04	1:1	1.040	1.222	1.271	
1745.00	132322	Mid	right	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	24.0	22.87	1	0.00	1:1	0.792	1.297	1.027	
1745.00	132322	Mid	left	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	25.0	24.13	0	0.02	1:1	0.210	1.222	0.257	
1745.00	132322	Mid	left	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	24.0	22.87	1	-0.01	1:1	0.172	1.297	0.223	
1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	-0.01	1:1	0.944	1.213	1.145	
1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.02	1:1	0.954	1.245	1.188	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	1	50	19.0	18.16	0	0.04	1:1	1.280	1.213	1.553	
1720.00	132072	Low	bottom	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	17.95	0	0.01	1:1	1.510	1.274	1.924	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.05	0	0.00	1:1	1.270	1.245	1.581	
1770.00	132572	High	bottom	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	50	25	19.0	18.00	0	0.01	1:1	1.090	1.259	1.372	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0432M	20	QPSK	100	0	19.0	17.87	0	0.00	1:1	1.270	1.297	1.647	
1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	17.91	0	0.01	1:1	1.910	1.285	2.454	
1745.00	132322	Mid	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	17.93	0	0.01	1:1	1.720	1.279	2.200	
1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	1	50	19.0	18.20	0	-0.05	1:1	1.740	1.202	2.091	
1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	17.94	0	0.03	1:1	2.040	1.276	**2.603**	A67
1745.00	132322	Mid	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	17.99	0	-0.02	1:1	1.830	1.262	2.309	
1770.00	132572	High	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	18.25	0	-0.03	1:1	1.770	1.189	2.105	
1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	100	0	19.0	17.92	0	0.02	1:1	1.870	1.282	2.397	
1720.00	132072	Low	top	0 mm	LTE Band 66 (AWS)	F	0104M	20	QPSK	50	25	19.0	17.94	0	0.01	1:1	2.030	1.276	2.590	
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: Blue entry represent variability measurement.

Table 11-52
LTE Band 25 (PCS) Phablet SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1860.00	26140	Low	back	12 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	25.0	23.92	0	-0.01	1:1	0.350	1.282	0.449	
1860.00	26140	Low	back	12 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	24.0	22.78	1	0.00	1:1	0.275	1.324	0.364	
1860.00	26140	Low	front	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	25.0	23.92	0	-0.01	1:1	0.879	1.282	1.127	
1860.00	26140	Low	front	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	24.0	22.78	1	0.01	1:1	0.633	1.324	0.838	
1860.00	26140	Low	bottom	14 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	25.0	23.92	0	0.02	1:1	0.449	1.282	0.576	
1860.00	26140	Low	bottom	14 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	24.0	22.78	1	-0.01	1:1	0.337	1.324	0.446	
1860.00	26140	Low	right	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	25.0	23.92	0	-0.02	1:1	0.580	1.282	0.744	
1860.00	26140	Low	right	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	24.0	22.78	1	0.00	1:1	0.457	1.324	0.605	
1860.00	26140	Low	left	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	25.0	23.92	0	0.00	1:1	0.192	1.282	0.246	
1860.00	26140	Low	left	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	24.0	22.78	1	0.03	1:1	0.151	1.324	0.200	
1882.50	26365	Mid	back	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	-0.02	1:1	0.784	1.250	0.980	
1882.50	26365	Mid	back	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	0.00	1:1	0.778	1.309	1.018	
1882.50	26365	Mid	bottom	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	1	99	19.0	18.03	0	0.00	1:1	1.460	1.250	1.825	
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	50	19.0	17.81	0	-0.02	1:1	1.340	1.315	1.762	
1882.50	26365	Mid	bottom	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	0	19.0	17.83	0	-0.03	1:1	1.410	1.309	1.846	
1905.00	26590	High	bottom	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	50	50	19.0	17.75	0	0.00	1:1	1.510	1.334	2.014	A68
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	B	0782M	20	QPSK	100	0	19.0	17.77	0	0.00	1:1	1.250	1.327	1.659	
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 11-53
LTE Band 41 Phablet SAR

MEASUREMENT RESULTS																					
Power Class	FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
	MHz	Ch.																			
Power Class 3	2680.00	41490	High	back	12 mm	LTE Band 41	B	0782M	20	QPSK	1	50	23.0	21.84	0	-0.04	1:1.58	0.148	1.306	0.193	
Power Class 3	2680.00	41490	High	back	12 mm	LTE Band 41	B	0782M	20	QPSK	50	50	23.0	21.87	0	-0.03	1:1.58	0.145	1.297	0.188	
Power Class 3	2680.00	41490	High	front	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	23.0	21.84	0	-0.01	1:1.58	0.454	1.306	0.593	
Power Class 3	2680.00	41490	High	front	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	23.0	21.87	0	-0.01	1:1.58	0.446	1.297	0.578	
Power Class 3	2680.00	41490	High	bottom	14 mm	LTE Band 41	B	0782M	20	QPSK	1	50	23.0	21.84	0	0.01	1:1.58	0.225	1.306	0.294	
Power Class 3	2680.00	41490	High	bottom	14 mm	LTE Band 41	B	0782M	20	QPSK	50	50	23.0	21.87	0	-0.01	1:1.58	0.226	1.297	0.293	
Power Class 3	2680.00	41490	High	right	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	23.0	21.84	0	0.08	1:1.58	0.245	1.306	0.320	
Power Class 3	2680.00	41490	High	right	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	23.0	21.87	0	0.03	1:1.58	0.245	1.297	0.318	
Power Class 3	2680.00	41490	High	left	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	23.0	21.84	0	0.05	1:1.58	0.130	1.306	0.170	
Power Class 3	2680.00	41490	High	left	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	23.0	21.87	0	0.03	1:1.58	0.123	1.297	0.160	
Power Class 3	2680.00	41490	High	back	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	18.5	18.08	0	-0.05	1:1.58	0.782	1.102	0.862	
Power Class 3	2680.00	41490	High	back	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	18.5	17.91	0	-0.04	1:1.58	0.757	1.146	0.868	
Power Class 3	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	1	0	18.5	17.65	0	-0.04	1:1.58	1.530	1.216	1.860	
Power Class 3	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	1	99	18.5	17.64	0	-0.01	1:1.58	1.540	1.219	1.877	
Power Class 3	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	18.5	17.78	0	0.05	1:1.58	1.800	1.180	2.124	
Power Class 3	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	18.5	17.78	0	0.01	1:1.58	1.850	1.180	2.183	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	1	50	18.5	18.08	0	-0.01	1:1.58	1.710	1.102	1.884	
Power Class 3	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	25	18.5	17.69	0	-0.05	1:1.58	1.580	1.205	1.904	
Power Class 3	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	18.5	17.63	0	-0.01	1:1.58	1.550	1.222	1.894	
Power Class 3	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	25	18.5	17.82	0	0.02	1:1.58	1.800	1.169	2.104	
Power Class 3	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	0	18.5	17.72	0	0.09	1:1.58	1.830	1.197	2.191	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	50	18.5	17.91	0	0.00	1:1.58	1.740	1.146	1.994	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	100	0	18.5	17.77	0	0.02	1:1.58	1.700	1.183	2.011	
Power Class 2	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	0782M	20	QPSK	50	0	20.1	19.39	0	-0.01	1:2.31	1.870	1.178	2.203	A69

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 11-54
NR Band n66 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1720.00	344000	Low	back	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.03	1:1	0.320	1.076	0.344	
1720.00	344000	Low	back	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	-0.03	1:1	0.356	1.233	0.439	
1720.00	344000	Low	front	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.01	1:1	0.902	1.076	0.971	
1720.00	344000	Low	front	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.03	1:1	0.939	1.233	1.158	
1720.00	344000	Low	front	0 mm	NR Band n66 (AWS)	B	0813M	20	CP-OFDM	QPSK	1	1	23.0	22.39	1.5	0.01	1:1	0.635	1.151	0.731	
1720.00	344000	Low	bottom	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.01	1:1	0.462	1.076	0.497	
1720.00	344000	Low	bottom	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.04	1:1	0.481	1.233	0.593	
1720.00	344000	Low	right	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.02	1:1	0.689	1.076	0.741	
1720.00	344000	Low	right	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.01	1:1	0.727	1.233	0.896	
1720.00	344000	Low	left	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.07	1:1	0.189	1.076	0.203	
1720.00	344000	Low	left	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.07	1:1	0.187	1.233	0.231	
1745.00	349000	Mid	back	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	-0.02	1:1	0.810	1.023	0.829	
1745.00	349000	Mid	back	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.04	1:1	0.845	1.012	0.855	
1745.00	349000	Mid	bottom	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	-0.04	1:1	1.020	1.023	1.043	
1745.00	349000	Mid	bottom	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.01	1:1	1.070	1.012	1.083	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.09	1:1	1.530	1.135	1.737	
1720.00	344000	Low	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.42	0	0.00	1:1	1.910	1.143	2.183	A70
1745.00	349000	Mid	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.44	0	-0.01	1:1	1.660	1.138	1.889	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.02	1:1	1.590	1.132	1.800	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	100	0	20.0	19.44	0	0.00	1:1	1.620	1.138	1.844	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	CP-OFDM	QPSK	1	1	20.0	19.48	0	-0.05	1:1	1.660	1.127	1.871	
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 11-55
NR Band n25 Phablet SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1860.00	372000	Low	back	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.03	1:1	0.301	1.303	0.392	
1860.00	372000	Low	back	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.06	1:1	0.299	1.265	0.378	
1860.00	372000	Low	front	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.08	1:1	0.741	1.303	0.966	
1860.00	372000	Low	front	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.04	1:1	0.764	1.265	0.966	
1860.00	372000	Low	bottom	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.04	1:1	0.392	1.303	0.511	
1860.00	372000	Low	bottom	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.02	1:1	0.377	1.265	0.477	
1860.00	372000	Low	right	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.04	1:1	0.448	1.303	0.584	
1860.00	372000	Low	right	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.02	1:1	0.445	1.265	0.563	
1860.00	372000	Low	left	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.12	1:1	0.107	1.303	0.139	
1860.00	372000	Low	left	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.06	1:1	0.143	1.265	0.181	
1905.00	381000	High	back	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.02	1:1	0.732	1.219	0.892	
1905.00	381000	High	back	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.01	1:1	0.727	1.205	0.876	
1860.00	372000	Low	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	19.0	17.92	0	0.01	1:1	1.330	1.282	1.705	
1882.50	376500	Mid	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.04	0	0.00	1:1	1.410	1.247	1.758	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.07	1:1	1.450	1.219	1.768	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.01	1:1	1.460	1.205	1.759	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	CP-OFDM	QPSK	1	1	19.0	18.04	0	0.02	1:1	1.470	1.247	1.833	A71
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 11-56
NR Band n77 Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.00	1:1	0.641	1.109	0.711	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.00	1:1	0.697	1.172	0.817	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	-0.01	1:1	0.861	1.216	1.047	A72
3930.00	662000	High	back	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.07	1:1	0.554	1.005	0.557	
3930.00	662000	High	back	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	-0.06	1:1	0.704	1.019	0.717	
3750.00	650000	Low	top	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	137	18.5	18.00	0	-0.07	1:1	1.450	1.122	1.627	
3930.00	662000	High	top	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.05	1:1	1.620	1.005	1.628	A73
3750.00	650000	Low	top	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	0	18.5	17.91	0	0.04	1:1	1.530	1.146	1.753	
3930.00	662000	High	top	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.01	1:1	1.520	1.019	1.549	
3930.00	662000	High	top	0 mm	NR Band n77	F	0646M	100	DFT-S-OFDM	QPSK	270	0	18.5	18.29	0	0.02	1:1	1.520	1.050	1.596	
3930.00	662000	High	top	0 mm	NR Band n77	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	-0.03	1:1	1.420	1.161	1.649	
3750.00	650000	Low	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	N/A	1	137	18.0	17.12	0	-0.01	1:1	1.180	1.225	1.446	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	N/A	1	137	18.0	17.58	0	-0.02	1:1	1.090	1.102	1.201	
3750.00	650000	Low	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	N/A	135	138	18.0	17.00	0	0.07	1:1	1.160	1.259	1.460	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	N/A	135	69	18.0	17.48	0	0.00	1:1	1.090	1.127	1.228	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	N/A	270	0	18.0	17.39	0	0.02	1:1	1.110	1.151	1.278	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	CP-OFDM	N/A	1	1	18.0	17.10	0	-0.01	1:1	1.170	1.230	1.439	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Phablet 4 W/kg (mW/g) averaged over 10 grams												

Table 11-57
WLAN MIMO Phablet SAR

MEASUREMENT RESULTS																					
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
5260	52	back	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.56	18.0	17.69	0.09	97.92	0.099	0.024	1.107	1.021	0.027	
5260	52	front	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.56	18.0	17.69	0.06	97.92	5.140	0.692	1.107	1.021	0.782	
5260	52	top	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.56	18.0	17.69	0.03	97.92	3.720	0.584	1.107	1.021	0.660	
5260	52	bottom	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.56	18.0	17.69	0.07	97.92	5.430	0.623	1.107	1.021	0.704	
5260	52	left	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.56	18.0	17.69	-0.04	97.92	0.333	0.075	1.107	1.021	0.085	
5720	144	back	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.60	18.0	17.14	0.02	97.92	0.272	0.057	1.096	1.021	0.071	
5720	144	front	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.60	18.0	17.14	0.01	97.92	2.700	0.563	1.096	1.021	0.701	
5720	144	top	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.60	18.0	17.14	-0.02	97.92	4.040	0.723	1.096	1.021	0.900	
5720	144	bottom	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.60	18.0	17.14	0.06	97.92	5.150	0.681	1.096	1.021	0.848	
5720	144	left	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.60	18.0	17.14	0.10	97.92	0.455	0.083	1.096	1.021	0.103	
5845	169	back	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.64	18.0	17.05	0.01	97.92	0.282	0.065	1.086	1.021	0.083	
5845	169	front	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.64	18.0	17.05	0.07	97.92	6.150	0.724	1.086	1.021	0.920	
5845	169	top	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.64	18.0	17.05	-0.01	97.92	5.450	0.905	1.086	1.021	1.150	
5845	169	bottom	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.64	18.0	17.05	0.01	97.92	7.140	0.924	1.086	1.021	1.175	A74
5845	169	left	0 mm	802.11n	OFDM	MIMO	0436M	20	13	18.0	17.64	18.0	17.05	0.01	97.92	0.525	0.083	1.086	1.021	0.106	
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 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm.

Table 11-58
NFC Phablet SAR

MEASUREMENT RESULTS									
FREQUENCY	Side	Spacing	Mode	Type	Antenna Config.	Device Serial Number	Power Drift	SAR (10g)	Plot #
MHz								(W/kg)	
13.56	back	0 mm	NFC	B	NFC	0374M	0.01	0.009	A75
13.56	front	0 mm	NFC	B	NFC	0374M	0.07	0.000	
13.56	right	0 mm	NFC	B	NFC	0374M	0.02	0.000	
13.56	left	0 mm	NFC	B	NFC	0374M	0.05	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		

11.5 Standalone UMPC Body SAR Data

Table 11-59
GPRS UMPC Body SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	# of Time Slots	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
824.20	128	back	10 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	-0.10	1:2.76	0.469	1.096	0.514	A76
824.20	128	front	10 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	-0.01	1:2.76	0.386	1.096	0.423	
824.20	128	bottom	10 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	-0.19	1:2.76	0.294	1.096	0.322	
824.20	128	right	10 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	-0.11	1:2.76	0.340	1.096	0.373	
1850.20	512	back	14 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.70	-0.01	1:2.76	0.395	1.514	0.598	
1880.00	661	back	14 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.79	0.01	1:2.76	0.373	1.483	0.553	
1909.80	810	back	14 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.00	1:2.76	0.459	1.449	0.665	A77
1909.80	810	front	12 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.10	1:2.76	0.424	1.449	0.614	
1909.80	810	bottom	18 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.05	1:2.76	0.274	1.449	0.397	
1909.80	810	right	10 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	-0.09	1:2.76	0.143	1.449	0.207	
1909.80	810	back	10 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	0.04	1:2.076	0.209	1.242	0.260	
1909.80	810	front	10 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	-0.02	1:2.076	0.134	1.242	0.166	
1909.80	810	bottom	10 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	0.03	1:2.076	0.268	1.242	0.333	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-60
UMTS UMPC Body SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Tune State	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
826.40	4132	back	10 mm	UMTS 850	RMC	A+B	38	0428M	25.5	24.84	-0.03	1:1	0.434	1.164	0.505	A78
826.40	4132	front	10 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	0.05	1:1	0.338	1.164	0.393	
826.40	4132	bottom	10 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	0.03	1:1	0.294	1.164	0.342	
826.40	4132	right	10 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	-0.13	1:1	0.336	1.164	0.391	
1732.40	1412	back	14 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	-0.03	1:1	0.352	1.222	0.430	
1732.40	1412	front	12 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	0.02	1:1	0.446	1.222	0.545	
1732.40	1412	bottom	18 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	-0.07	1:1	0.354	1.222	0.433	
1732.40	1412	right	10 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	0.04	1:1	0.473	1.222	0.578	A79
1712.40	1312	back	10 mm	UMTS 1750	RMC	B	N/A	0417M	19.0	18.22	-0.01	1:1	0.169	1.197	0.202	
1712.40	1312	front	10 mm	UMTS 1750	RMC	B	N/A	0417M	19.0	18.22	-0.03	1:1	0.176	1.197	0.211	
1712.40	1312	bottom	10 mm	UMTS 1750	RMC	B	N/A	0417M	19.0	18.22	-0.03	1:1	0.360	1.197	0.431	
1852.40	9262	back	14 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	0.00	1:1	0.427	1.135	0.485	
1852.40	9262	front	12 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	-0.02	1:1	0.590	1.135	0.670	
1880.00	9400	front	12 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.40	-0.03	1:1	0.637	1.148	0.731	
1907.60	9538	front	12 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.39	0.01	1:1	0.665	1.151	0.765	A80
1852.40	9262	bottom	18 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	0.02	1:1	0.360	1.135	0.409	
1852.40	9262	right	10 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	0.00	1:1	0.230	1.135	0.261	
1852.40	9262	back	10 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	-0.01	1:1	0.161	1.216	0.196	
1852.40	9262	front	10 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	0.00	1:1	0.139	1.216	0.169	
1852.40	9262	bottom	10 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	0.00	1:1	0.349	1.216	0.424	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram						

Table 11-61
LTE Band 12 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	back	10 mm	LTE Band 12	A+B	0	0428M	10	QPSK	1	0	25.5	24.91	0	-0.09	1:1	0.360	1.146	0.413	A81
707.50	23095	Mid	back	10 mm	LTE Band 12	A+B	0	0428M	10	QPSK	25	12	24.5	23.80	1	0.01	1:1	0.281	1.175	0.330	
707.50	23095	Mid	front	10 mm	LTE Band 12	A+B	54	0428M	10	QPSK	1	0	25.5	24.91	0	0.10	1:1	0.285	1.146	0.327	
707.50	23095	Mid	front	10 mm	LTE Band 12	A+B	54	0428M	10	QPSK	25	12	24.5	23.80	1	-0.01	1:1	0.233	1.175	0.274	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A+B	0	0428M	10	QPSK	1	0	25.5	24.91	0	0.06	1:1	0.226	1.146	0.259	
707.50	23095	Mid	bottom	10 mm	LTE Band 12	A+B	0	0428M	10	QPSK	25	12	24.5	23.80	1	0.08	1:1	0.149	1.175	0.175	
707.50	23095	Mid	right	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	1	0	25.5	24.91	0	-0.08	1:1	0.191	1.146	0.219	
707.50	23095	Mid	right	10 mm	LTE Band 12	A+B	36	0428M	10	QPSK	25	12	24.5	23.80	1	0.02	1:1	0.119	1.175	0.140	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-62
LTE Band 13 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	back	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	0.02	1:1	0.258	1.211	0.312	A82
782.00	23230	Mid	back	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	-0.01	1:1	0.202	1.197	0.242	
782.00	23230	Mid	front	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	-0.09	1:1	0.229	1.211	0.277	
782.00	23230	Mid	front	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	0.00	1:1	0.174	1.197	0.208	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	0.15	1:1	0.102	1.211	0.124	
782.00	23230	Mid	bottom	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	-0.02	1:1	0.089	1.197	0.107	
782.00	23230	Mid	right	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	-0.07	1:1	0.122	1.211	0.148	
782.00	23230	Mid	right	10 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	0.00	1:1	0.104	1.197	0.124	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram

Table 11-63
LTE Band 26 (Cell) UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	1	0	25.5	24.55	0	0.01	1:1	0.504	1.245	0.627	A83
831.50	26865	Mid	back	10 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	36	37	24.5	23.21	1	0.00	1:1	0.417	1.346	0.561	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A+B	0	0428M	15	QPSK	1	0	25.5	24.55	0	-0.03	1:1	0.343	1.245	0.427	
831.50	26865	Mid	front	10 mm	LTE Band 26 (Cell)	A+B	0	0428M	15	QPSK	36	37	24.5	23.21	1	-0.05	1:1	0.282	1.346	0.380	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A+B	0	0428M	15	QPSK	1	0	25.5	24.55	0	0.03	1:1	0.293	1.245	0.365	
831.50	26865	Mid	bottom	10 mm	LTE Band 26 (Cell)	A+B	0	0428M	15	QPSK	36	37	24.5	23.21	1	-0.01	1:1	0.257	1.346	0.346	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A+B	37	0428M	15	QPSK	1	0	25.5	24.55	0	0.05	1:1	0.184	1.245	0.229	
831.50	26865	Mid	right	10 mm	LTE Band 26 (Cell)	A+B	37	0428M	15	QPSK	36	37	24.5	23.21	1	-0.03	1:1	0.177	1.346	0.238	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram

Table 11-64
LTE Band 66 (AWS) UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	back	14 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	-0.01	1:1	0.398	1.222	0.486	
1745.00	132322	Mid	back	14 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	0.01	1:1	0.300	1.297	0.389	
1745.00	132322	Mid	front	12 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	0.01	1:1	0.361	1.222	0.441	
1745.00	132322	Mid	front	12 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	-0.03	1:1	0.278	1.297	0.361	
1745.00	132322	Mid	bottom	18 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	-0.02	1:1	0.395	1.222	0.483	
1745.00	132322	Mid	bottom	18 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	0.00	1:1	0.305	1.297	0.396	
1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	-0.08	1:1	0.410	1.222	0.501	A84
1745.00	132322	Mid	right	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	-0.02	1:1	0.326	1.297	0.423	
1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	0.01	1:1	0.154	1.213	0.187	
1745.00	132322	Mid	back	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	-0.04	1:1	0.151	1.245	0.188	
1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	-0.06	1:1	0.165	1.213	0.200	
1745.00	132322	Mid	front	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	-0.01	1:1	0.161	1.245	0.200	
1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	-0.07	1:1	0.298	1.213	0.361	
1745.00	132322	Mid	bottom	10 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	-0.03	1:1	0.297	1.245	0.370	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram

Table 11-65
LTE Band 4 Antenna F (AWS) UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1732.50	20175	Mid	back	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	0.00	1:1	0.225	1.153	0.259	
1732.50	20175	Mid	back	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	0.00	1:1	0.215	1.167	0.251	
1732.50	20175	Mid	front	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	0.01	1:1	0.191	1.153	0.220	
1732.50	20175	Mid	front	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	0.00	1:1	0.182	1.167	0.212	
1732.50	20175	Mid	top	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	-0.01	1:1	0.313	1.153	0.361	A85
1732.50	20175	Mid	top	10 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	0.00	1:1	0.304	1.167	0.355	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-66
LTE Band 25 (PCS) UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1860.00	26140	Low	back	14 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	0.05	1:1	0.433	1.282	0.555	
1860.00	26140	Low	back	14 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.08	1:1	0.319	1.324	0.422	
1860.00	26140	Low	front	12 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	-0.03	1:1	0.449	1.282	0.576	A86
1860.00	26140	Low	front	12 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.02	1:1	0.330	1.324	0.437	
1860.00	26140	Low	bottom	18 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	-0.03	1:1	0.283	1.282	0.363	
1860.00	26140	Low	bottom	18 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	-0.01	1:1	0.215	1.324	0.285	
1860.00	26140	Low	right	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	0.00	1:1	0.232	1.282	0.297	
1860.00	26140	Low	right	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.01	1:1	0.195	1.324	0.258	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	0.01	1:1	0.173	1.250	0.216	
1882.50	26365	Mid	back	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	-0.01	1:1	0.158	1.309	0.207	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	0.03	1:1	0.213	1.250	0.266	
1882.50	26365	Mid	front	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	-0.04	1:1	0.205	1.309	0.268	
1882.50	26365	Mid	bottom	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	-0.01	1:1	0.437	1.250	0.546	
1882.50	26365	Mid	bottom	10 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	0.01	1:1	0.426	1.309	0.558	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-67
LTE Band 41 UMPC Body SAR

MEASUREMENT RESULTS																						
Power Class	FREQUENCY			Side	Spacing	Mode	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
	MHz	Ch.																(W/kg)		(W/kg)	
Power Class 3	2680.00	41490	High	back	14 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	-0.01	1:1.58	0.265	1.306	0.346	
Power Class 3	2680.00	41490	High	back	14 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	0.03	1:1.58	0.260	1.297	0.337	
Power Class 3	2680.00	41490	High	front	12 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	0.01	1:1.58	0.231	1.306	0.302	
Power Class 3	2680.00	41490	High	front	12 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	-0.04	1:1.58	0.230	1.297	0.298	
Power Class 3	2680.00	41490	High	bottom	18 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	-0.04	1:1.58	0.284	1.306	0.371	
Power Class 3	2680.00	41490	High	bottom	18 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	0.04	1:1.58	0.283	1.297	0.367	
Power Class 3	2680.00	41490	High	right	10 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	0.05	1:1.58	0.159	1.306	0.208	
Power Class 3	2680.00	41490	High	right	10 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	-0.04	1:1.58	0.163	1.297	0.211	
Power Class 3	2680.00	41490	High	back	10 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	0.01	1:1.58	0.223	1.102	0.246	
Power Class 3	2680.00	41490	High	back	10 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	0.01	1:1.58	0.215	1.146	0.246	
Power Class 3	2680.00	41490	High	front	10 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	0.03	1:1.58	0.113	1.102	0.125	
Power Class 3	2680.00	41490	High	front	10 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	-0.02	1:1.58	0.111	1.146	0.127	
Power Class 3	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	-0.05	1:1.58	0.363	1.102	0.400	A87
Power Class 3	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	-0.01	1:1.58	0.349	1.146	0.400	
Power Class 2	2680.00	41490	High	bottom	10 mm	LTE Band 41	B	0417M	20	QPSK	1	50	20.1	19.73	0	0.00	1:2.31	0.363	1.089	0.395	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-68
NR Band n12 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	141500	Mid	back	10 mm	NR Band n12	0	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	-0.03	1:1	0.287	1.374	0.394	
707.50	141500	Mid	back	10 mm	NR Band n12	0	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.02	1:1	0.303	1.377	0.417	A88
707.50	141500	Mid	back	10 mm	NR Band n12	0	0337M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	-0.02	1:1	0.214	1.445	0.309	
707.50	141500	Mid	front	10 mm	NR Band n12	46	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.03	1:1	0.258	1.374	0.354	
707.50	141500	Mid	front	10 mm	NR Band n12	46	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.01	1:1	0.267	1.377	0.368	
707.50	141500	Mid	bottom	10 mm	NR Band n12	45	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.03	1:1	0.174	1.374	0.239	
707.50	141500	Mid	bottom	10 mm	NR Band n12	45	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.02	1:1	0.171	1.377	0.235	
707.50	141500	Mid	right	10 mm	NR Band n12	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.11	1:1	0.157	1.374	0.216	
707.50	141500	Mid	right	10 mm	NR Band n12	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.00	1:1	0.167	1.377	0.230	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-69
NR Band n5 UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.00	1:1	0.394	1.222	0.481	
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	0.410	1.230	0.504	A89
836.50	167300	Mid	back	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	0.02	1:1	0.275	1.268	0.349	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.00	1:1	0.278	1.222	0.340	
836.50	167300	Mid	front	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.01	1:1	0.286	1.230	0.352	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A+B	0	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.10	1:1	0.220	1.222	0.269	
836.50	167300	Mid	bottom	10 mm	NR Band n5 (Cell)	A+B	0	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.05	1:1	0.226	1.230	0.278	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.02	1:1	0.161	1.222	0.197	
836.50	167300	Mid	right	10 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.01	1:1	0.154	1.230	0.189	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-70
NR Band n66 UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1720.00	344000	Low	back	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.03	1:1	0.373	1.076	0.401	
1720.00	344000	Low	back	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	-0.02	1:1	0.387	1.233	0.477	
1720.00	344000	Low	back	14 mm	NR Band n66 (AWS)	B	0813M	20	CP-OFDM	QPSK	1	1	23.0	22.39	1.5	0.12	1:1	0.249	1.151	0.287	
1720.00	344000	Low	front	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.01	1:1	0.357	1.076	0.384	
1720.00	344000	Low	front	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.02	1:1	0.348	1.233	0.429	
1720.00	344000	Low	bottom	18 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.02	1:1	0.323	1.076	0.348	
1720.00	344000	Low	bottom	18 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.05	1:1	0.325	1.233	0.401	
1720.00	344000	Low	right	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.02	1:1	0.341	1.076	0.367	
1720.00	344000	Low	right	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.03	1:1	0.361	1.233	0.445	
1745.00	349000	Mid	back	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.07	1:1	0.191	1.023	0.195	
1745.00	349000	Mid	back	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.06	1:1	0.202	1.012	0.204	
1745.00	349000	Mid	front	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.00	1:1	0.113	1.023	0.116	
1745.00	349000	Mid	front	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	0.04	1:1	0.119	1.012	0.120	
1745.00	349000	Mid	bottom	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.03	1:1	0.248	1.023	0.254	
1745.00	349000	Mid	bottom	10 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.05	1:1	0.262	1.012	0.265	
1770.00	354000	High	back	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.01	1:1	0.307	1.135	0.348	
1770.00	354000	High	back	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	0.01	1:1	0.310	1.132	0.351	
1770.00	354000	High	front	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.02	1:1	0.185	1.135	0.210	
1770.00	354000	High	front	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.01	1:1	0.196	1.132	0.222	
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.04	1:1	0.432	1.135	0.490	
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.06	1:1	0.443	1.132	0.501	A90
1770.00	354000	High	top	10 mm	NR Band n66 (AWS)	F	0777M	20	CP-OFDM	QPSK	1	1	20.0	19.48	0	0.03	1:1	0.443	1.127	0.499	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-71
NR Band n25 UMPC Body SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1860.00	372000	Low	back	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.02	1:1	0.413	1.303	0.538	A91
1860.00	372000	Low	back	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.06	1:1	0.413	1.265	0.522	
1860.00	372000	Low	back	14 mm	NR Band n25 (PCS)	B	0344M	20	CP-OFDM	QPSK	1	1	23.0	21.87	1.5	0.01	1:1	0.268	1.297	0.348	
1860.00	372000	Low	front	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.00	1:1	0.346	1.303	0.451	
1860.00	372000	Low	front	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.00	1:1	0.353	1.265	0.447	
1860.00	372000	Low	bottom	18 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.00	1:1	0.375	1.303	0.489	
1860.00	372000	Low	bottom	18 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.03	1:1	0.373	1.265	0.472	
1860.00	372000	Low	right	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.09	1:1	0.196	1.303	0.255	
1860.00	372000	Low	right	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.02	1:1	0.196	1.265	0.248	
1905.00	381000	High	back	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.02	1:1	0.245	1.219	0.299	
1905.00	381000	High	back	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.03	1:1	0.251	1.205	0.302	
1905.00	381000	High	front	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.00	1:1	0.156	1.219	0.190	
1905.00	381000	High	front	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.01	1:1	0.156	1.205	0.188	
1905.00	381000	High	bottom	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.01	1:1	0.337	1.219	0.411	
1905.00	381000	High	bottom	10 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.08	1:1	0.330	1.205	0.398	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

Table 11-72
NR Band n41 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	back	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	-0.01	1:1	0.158	1.148	0.181	
2592.99	518598	Mid	back	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.02	1:1	0.150	1.156	0.173	
2592.99	518598	Mid	front	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.01	1:1	0.147	1.148	0.169	
2592.99	518598	Mid	front	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.02	1:1	0.195	1.156	0.225	
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	-0.04	1:1	0.321	1.148	0.369	
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	0.356	1.156	0.412	A92
2592.99	518598	Mid	top	10 mm	NR Band n41	F	0646M	100	CP-OFDM	QPSK	1	1	19.0	18.20	0	-0.05	1:1	0.332	1.202	0.399	
2592.99	518598	Mid	back	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.06	1:1	0.199	1.355	0.270	
2592.99	518598	Mid	front	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.03	1:1	0.116	1.355	0.157	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.00	1:1	0.266	1.355	0.360	
2592.99	518598	Mid	right	10 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.03	1:1	0.049	1.355	0.066	
2592.99	518598	Mid	back	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.06	1:1	0.029	1.253	0.036	
2592.99	518598	Mid	front	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.09	1:1	0.010	1.253	0.013	
2592.99	518598	Mid	top	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.14	1:1	0.007	1.253	0.009	
2592.99	518598	Mid	right	10 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.06	1:1	0.008	1.253	0.010	
2592.99	518598	Mid	back	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.01	1:1	0.008	1.303	0.010	
2592.99	518598	Mid	front	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.06	1:1	0.004	1.303	0.005	
2592.99	518598	Mid	bottom	10 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.07	1:1	0.011	1.303	0.014	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 11-73
NR Band n77 UMPC Body SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.09	1:1	0.132	1.109	0.146	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.01	1:1	0.122	1.172	0.143	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.05	1:1	0.139	1.109	0.154	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.03	1:1	0.143	1.172	0.168	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.02	1:1	0.336	1.109	0.373	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.01	1:1	0.349	1.172	0.409	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	270	0	18.5	17.72	0	0.01	1:1	0.351	1.197	0.420	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	-0.02	1:1	0.468	1.216	0.569	A93
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.01	1:1	0.160	1.282	0.205	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.04	1:1	0.148	1.285	0.190	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.05	1:1	0.254	1.282	0.326	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.20	1:1	0.226	1.285	0.290	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.03	1:1	0.374	1.282	0.479	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.00	1:1	0.360	1.285	0.463	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	16.79	0	0.04	1:1	0.376	1.321	0.497	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.09	1:1	0.316	1.282	0.405	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.02	1:1	0.274	1.285	0.352	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.21	1:1	0.049	1.479	0.072	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	-0.11	1:1	0.034	1.479	0.050	
3500.01	633334	Mid	top	10 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.01	1:1	0.062	1.479	0.092	
3500.01	633334	Mid	right	10 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.03	1:1	0.010	1.479	0.015	
3500.01	633334	Mid	back	10 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	-0.12	1:1	0.085	1.054	0.090	
3500.01	633334	Mid	front	10 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.03	1:1	0.054	1.054	0.057	
3500.01	633334	Mid	bottom	10 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.10	1:1	0.134	1.054	0.141	
3930.00	662000	High	back	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.09	1:1	0.120	1.005	0.121	
3930.00	662000	High	back	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	-0.02	1:1	0.191	1.019	0.195	
3930.00	662000	High	front	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.07	1:1	0.180	1.005	0.181	
3930.00	662000	High	front	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	-0.05	1:1	0.195	1.019	0.199	
3750.00	650000	Low	top	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	137	18.5	18.00	0	0.01	1:1	0.215	1.122	0.241	
3930.00	662000	High	top	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	-0.05	1:1	0.471	1.005	0.473	
3750.00	650000	Low	top	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	0	18.5	17.91	0	-0.07	1:1	0.221	1.146	0.253	
3930.00	662000	High	top	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.00	1:1	0.465	1.019	0.474	
3930.00	662000	High	top	10 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	270	0	18.5	18.29	0	-0.12	1:1	0.374	1.050	0.393	
3930.00	662000	High	top	10 mm	NR Band n77	F	0337M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	-0.03	1:1	0.342	1.161	0.397	
3930.00	662000	High	back	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.02	1:1	0.210	1.102	0.231	
3930.00	662000	High	back	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.05	1:1	0.214	1.127	0.241	
3930.00	662000	High	front	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.00	1:1	0.236	1.102	0.260	
3930.00	662000	High	front	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.01	1:1	0.243	1.127	0.274	
3750.00	650000	Low	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.12	0	0.03	1:1	0.620	1.225	0.760	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.01	1:1	0.662	1.102	0.730	
3750.00	650000	Low	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	138	18.0	17.00	0	0.02	1:1	0.643	1.259	0.810	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.01	1:1	0.679	1.127	0.765	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	270	0	18.0	17.39	0	0.06	1:1	0.675	1.151	0.777	
3930.00	662000	High	top	10 mm	NR Band n77	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	17.10	0	0.02	1:1	0.742	1.230	0.913	A94
3930.00	662000	High	right	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.02	1:1	0.116	1.102	0.128	
3930.00	662000	High	right	10 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.02	1:1	0.122	1.127	0.137	
3930.00	662000	High	back	10 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.16	1:1	0.037	1.047	0.039	
3930.00	662000	High	front	10 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.02	1:1	0.018	1.047	0.019	
3930.00	662000	High	top	10 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	-0.09	1:1	0.084	1.047	0.088	
3930.00	662000	High	right	10 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.05	1:1	0.009	1.047	0.009	
3750.00	650000	Low	back	10 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.04	1:1	0.044	1.365	0.060	
3750.00	650000	Low	front	10 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.07	1:1	0.040	1.365	0.055	
3750.00	650000	Low	bottom	10 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.05	1:1	0.066	1.365	0.090	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram							

Table 11-74
DTS SISO WLAN UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	back	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.02	98.85	0.195	0.154	1.000	1.012	0.156	
2412	1	front	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.02	98.85	0.167	0.133	1.000	1.012	0.135	
2412	1	bottom	10 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	0.00	98.85	0.308	0.250	1.000	1.012	**0.253**	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**											**UMPC Body** **1.6 W/kg (mW/g)** averaged over 1 gram								

Table 11-75
MIMO WLAN UMPC Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	back	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.04	98.85	0.332	0.270	1.035	1.012	0.283	
2412	1	front	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	0.16	98.85	0.308	0.243	1.035	1.012	0.255	
2412	1	top	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	0.03	98.85	0.489	0.387	1.035	1.012	0.405	A95
2412	1	bottom	10 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	0.01	98.85	0.289	0.232	1.035	1.012	0.243	
5260	52	back	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	-0.06	97.92	0.141	0.097	1.107	1.021	0.110	
5260	52	front	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	-0.05	97.92	0.141	0.115	1.107	1.021	0.130	
5260	52	top	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	0.00	97.92	0.285	0.206	1.107	1.021	0.233	
5260	52	bottom	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	-0.05	97.92	0.280	0.190	1.107	1.021	0.215	
5720	144	back	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	0.09	97.92	0.140	0.090	1.096	1.021	0.112	
5720	144	front	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	-0.19	97.92	0.173	0.132	1.096	1.021	0.164	
5720	144	top	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	-0.07	97.92	0.288	0.201	1.096	1.021	0.250	
5720	144	bottom	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	0.04	97.92	0.137	0.094	1.096	1.021	0.117	
5825	165	back	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.01	97.92	0.122	0.087	1.069	1.021	0.107	
5825	165	front	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.02	97.92	0.172	0.130	1.069	1.021	0.160	
5825	165	top	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.06	97.92	0.289	0.219	1.069	1.021	**0.269**	A96
5825	165	bottom	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.10	97.92	0.166	0.115	1.069	1.021	0.141	
5845	169	back	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.03	97.92	0.135	0.085	1.086	1.021	0.108	
5845	169	front	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.05	97.92	0.168	0.130	1.086	1.021	0.165	
5845	169	top	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.00	97.92	0.299	0.211	1.086	1.021	**0.268**	
5845	169	bottom	10 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.20	97.92	0.167	0.107	1.086	1.021	0.136	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**												**UMPC Body** **1.6 W/kg (mW/g)** averaged over 1 gram								

Note: To achieve the 22.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19.0 dBm
To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm

Table 11-76
DSS UMPC Body SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	back	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	-0.02	76.80	0.155	1.183	1.302	0.239	
2441	39	front	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.06	76.80	0.130	1.183	1.302	0.200	
2441	39	top	10 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.03	76.80	0.214	1.183	1.302	**0.330**	A97
2441	39	back	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.02	76.80	0.040	1.042	1.302	0.054	
2441	39	front	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	0.02	76.80	0.036	1.042	1.302	0.049	
2441	39	bottom	10 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	0.10	76.80	0.071	1.042	1.302	0.096	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Body 1.6 W/kg (mW/g) averaged over 1 gram								

11.6 Standalone UMPC Extremity SAR Data

Table 11-77
GPRS UMPC Extremity SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	# of Time Slots	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
824.20	128	back	0 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	0.02	1:2.76	1.240	1.096	1.359	A98
824.20	128	front	0 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	0.03	1:2.76	1.010	1.096	1.107	
824.20	128	bottom	0 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	0.00	1:2.76	1.010	1.096	1.107	
824.20	128	right	0 mm	GSM 850	GPRS	A+B	0428M	3	30.5	30.10	0.02	1:2.76	1.200	1.096	1.315	
1909.80	810	back	14 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.00	1:2.76	0.243	1.449	0.352	
1909.80	810	front	12 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.10	1:2.76	0.219	1.449	0.317	
1909.80	810	bottom	18 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	0.05	1:2.76	0.154	1.449	0.223	
1909.80	810	right	0 mm	GSM 1900	GPRS	B	0794M	3	27.5	25.89	-0.10	1:2.76	0.601	1.449	0.871	
1909.80	810	back	0 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	0.01	1:2.076	0.494	1.242	0.614	
1909.80	810	front	0 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	0.04	1:2.076	0.384	1.242	0.477	
1909.80	810	bottom	0 mm	GSM 1900	GPRS	B	0794M	4	21.0	20.06	0.01	1:2.076	1.200	1.242	1.490	A99
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams							

Table 11-78
UMTS UMPC Extremity SAR Data

MEASUREMENT RESULTS																
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Tune State	Device Serial Number	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)		(W/kg)	
826.40	4132	back	0 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	-0.11	1:1	1.130	1.164	1.315	A100
826.40	4132	front	0 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	0.00	1:1	0.863	1.164	1.005	
826.40	4132	bottom	0 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	-0.02	1:1	0.887	1.164	1.032	
826.40	4132	right	0 mm	UMTS 850	RMC	A+B	108	0428M	25.5	24.84	-0.03	1:1	1.020	1.164	1.187	
1732.40	1412	back	14 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	-0.03	1:1	0.223	1.222	0.273	
1732.40	1412	front	12 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	0.02	1:1	0.280	1.222	0.342	
1732.40	1412	bottom	18 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	-0.07	1:1	0.209	1.222	0.255	
1732.40	1412	right	0 mm	UMTS 1750	RMC	B	N/A	0417M	25.0	24.13	0.00	1:1	1.250	1.222	1.528	
1712.40	1312	back	0 mm	UMTS 1750	RMC	B	N/A	0794M	19.0	18.22	0.01	1:1	0.963	1.197	1.153	
1712.40	1312	front	0 mm	UMTS 1750	RMC	B	N/A	0794M	19.0	18.22	-0.01	1:1	0.882	1.197	1.056	
1712.40	1312	bottom	0 mm	UMTS 1750	RMC	B	N/A	0794M	19.0	18.22	0.02	1:1	1.920	1.197	2.298	A101
1732.40	1412	bottom	0 mm	UMTS 1750	RMC	B	N/A	0794M	19.0	18.16	-0.01	1:1	1.730	1.213	2.098	
1752.60	1513	bottom	0 mm	UMTS 1750	RMC	B	N/A	0794M	19.0	18.20	0.00	1:1	1.650	1.202	1.983	
1852.40	9262	back	14 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	0.00	1:1	0.240	1.135	0.272	
1852.40	9262	front	12 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	-0.02	1:1	0.311	1.135	0.353	
1852.40	9262	bottom	18 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	0.02	1:1	0.206	1.135	0.234	
1852.40	9262	right	0 mm	UMTS 1900	RMC	B	N/A	0794M	25.0	24.45	-0.04	1:1	0.529	1.135	0.600	
1852.40	9262	back	0 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	0.03	1:1	0.764	1.216	0.929	
1852.40	9262	front	0 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	0.01	1:1	0.624	1.216	0.759	
1852.40	9262	bottom	0 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.15	-0.01	1:1	1.640	1.216	1.994	
1880.00	9400	bottom	0 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.02	0.00	1:1	1.880	1.253	2.356	
1907.60	9538	bottom	0 mm	UMTS 1900	RMC	B	N/A	0794M	19.0	18.06	-0.01	1:1	1.930	1.242	2.397	A102
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams						

Table 11-79
LTE Band 12 UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
707.50	23095	Mid	back	0 mm	LTE Band 12	A+B	10	0428M	10	QPSK	1	0	25.5	24.91	0	0.13	1:1	0.912	1.146	1.045	
707.50	23095	Mid	back	0 mm	LTE Band 12	A+B	10	0428M	10	QPSK	25	12	24.5	23.80	1	-0.08	1:1	0.685	1.175	0.805	
707.50	23095	Mid	front	0 mm	LTE Band 12	A+B	54	0428M	10	QPSK	1	0	25.5	24.91	0	-0.01	1:1	0.776	1.146	0.889	
707.50	23095	Mid	front	0 mm	LTE Band 12	A+B	54	0428M	10	QPSK	25	12	24.5	23.80	1	0.00	1:1	0.570	1.175	0.670	
707.50	23095	Mid	bottom	0 mm	LTE Band 12	A+B	0	0428M	10	QPSK	1	0	25.5	24.91	0	0.01	1:1	0.986	1.146	1.130	
707.50	23095	Mid	bottom	0 mm	LTE Band 12	A+B	0	0428M	10	QPSK	25	12	24.5	23.80	1	-0.03	1:1	0.747	1.175	0.878	
707.50	23095	Mid	right	0 mm	LTE Band 12	A+B	108	0428M	10	QPSK	1	0	25.5	24.91	0	-0.19	1:1	1.280	1.146	1.467	A103
707.50	23095	Mid	right	0 mm	LTE Band 12	A+B	108	0428M	10	QPSK	25	12	24.5	23.80	1	-0.05	1:1	0.997	1.175	1.171	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population													UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams							

Table 11-80
LTE Band 13 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
782.00	23230	Mid	back	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	-0.10	1:1	0.548	1.211	0.664	
782.00	23230	Mid	back	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	-0.09	1:1	0.441	1.197	0.528	
782.00	23230	Mid	front	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	0.01	1:1	0.467	1.211	0.566	
782.00	23230	Mid	front	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	0.01	1:1	0.372	1.197	0.445	
782.00	23230	Mid	bottom	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	1	0	24.0	23.17	0	-0.04	1:1	0.293	1.211	0.355	
782.00	23230	Mid	bottom	0 mm	LTE Band 13	A+B	0	0428M	10	QPSK	25	12	23.0	22.22	1	-0.07	1:1	0.244	1.197	0.292	
782.00	23230	Mid	right	0 mm	LTE Band 13	A+B	108	0428M	10	QPSK	1	0	24.0	23.17	0	-0.07	1:1	0.583	1.211	0.706	A104
782.00	23230	Mid	right	0 mm	LTE Band 13	A+B	108	0428M	10	QPSK	25	12	23.0	22.22	1	-0.01	1:1	0.465	1.197	0.557	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams							

Table 11-81
LTE Band 26 (Cell) UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Tune State	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
831.50	26865	Mid	back	0 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	1	0	25.5	24.55	0	-0.05	1:1	1.090	1.245	1.357	A105
831.50	26865	Mid	back	0 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	36	37	24.5	23.21	1	-0.10	1:1	0.881	1.346	1.186	
831.50	26865	Mid	front	0 mm	LTE Band 26 (Cell)	A+B	37	0428M	15	QPSK	1	0	25.5	24.55	0	0.05	1:1	0.743	1.245	0.925	
831.50	26865	Mid	front	0 mm	LTE Band 26 (Cell)	A+B	37	0428M	15	QPSK	36	37	24.5	23.21	1	-0.13	1:1	0.577	1.346	0.777	
831.50	26865	Mid	bottom	0 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	1	0	25.5	24.55	0	0.01	1:1	0.870	1.245	1.083	
831.50	26865	Mid	bottom	0 mm	LTE Band 26 (Cell)	A+B	108	0428M	15	QPSK	36	37	24.5	23.21	1	-0.01	1:1	0.704	1.346	0.948	
831.50	26865	Mid	right	0 mm	LTE Band 26 (Cell)	A+B	73	0428M	15	QPSK	1	0	25.5	24.55	0	-0.12	1:1	0.762	1.245	0.949	
831.50	26865	Mid	right	0 mm	LTE Band 26 (Cell)	A+B	73	0428M	15	QPSK	36	37	24.5	23.21	1	-0.10	1:1	0.626	1.346	0.843	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population														UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams							

Table 11-82
LTE Band 66 (AWS) UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1745.00	132322	Mid	back	14 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	-0.01	1:1	0.227	1.222	0.277	
1745.00	132322	Mid	back	14 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	0.01	1:1	0.172	1.297	0.223	
1745.00	132322	Mid	front	12 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	0.01	1:1	0.198	1.222	0.242	
1745.00	132322	Mid	front	12 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	-0.03	1:1	0.153	1.297	0.198	
1745.00	132322	Mid	bottom	18 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	-0.02	1:1	0.230	1.222	0.281	
1745.00	132322	Mid	bottom	18 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	0.00	1:1	0.178	1.297	0.231	
1720.00	132072	Low	right	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	23.77	0	0.02	1:1	1.200	1.327	1.592	
1745.00	132322	Mid	right	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	24.13	0	0.02	1:1	1.240	1.222	1.515	
1770.00	132572	High	right	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	25.0	23.85	0	0.01	1:1	1.100	1.303	1.433	
1745.00	132322	Mid	right	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	24.0	22.87	1	0.00	1:1	0.959	1.297	1.244	
1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	-0.02	1:1	1.100	1.213	1.334	
1745.00	132322	Mid	back	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	0.00	1:1	1.090	1.245	1.357	
1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	-0.01	1:1	0.711	1.213	0.862	
1745.00	132322	Mid	front	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	0.02	1:1	0.718	1.245	0.894	
1720.00	132072	Low	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	17.76	0	0.01	1:1	1.270	1.330	1.689	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	18.16	0	-0.02	1:1	1.700	1.213	2.062	A106
1770.00	132572	High	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	1	50	19.0	17.91	0	-0.02	1:1	1.580	1.285	2.030	
1720.00	132072	Low	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	17.95	0	0.02	1:1	1.430	1.274	1.822	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.05	0	0.00	1:1	1.700	1.245	2.117	
1770.00	132572	High	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	50	25	19.0	18.00	0	0.00	1:1	1.490	1.259	1.876	
1745.00	132322	Mid	bottom	0 mm	LTE Band 66 (AWS)	B	0794M	20	QPSK	100	0	19.0	17.87	0	0.01	1:1	1.650	1.297	2.140	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-83
LTE Band 4 Antenna F (AWS) UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1732.50	20175	Mid	back	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	0.03	1:1	0.872	1.153	1.005	
1732.50	20175	Mid	back	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	0.02	1:1	0.853	1.167	0.995	
1732.50	20175	Mid	front	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	-0.01	1:1	0.895	1.153	1.032	
1732.50	20175	Mid	front	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	-0.03	1:1	0.901	1.167	1.051	
1732.50	20175	Mid	top	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	1	50	19.0	18.38	0	0.01	1:1	1.570	1.153	1.810	A107
1732.50	20175	Mid	top	0 mm	LTE Band 4 (AWS)	F	0328M	20	QPSK	50	50	19.0	18.33	0	-0.02	1:1	1.570	1.167	1.832	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-84
LTE Band 25 (PCS) UMPC Extremity SAR

MEASUREMENT RESULTS																				
FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																(W/kg)		(W/kg)	
1860.00	26140	Low	back	14 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	0.05	1:1	0.242	1.282	0.310	
1860.00	26140	Low	back	14 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.08	1:1	0.180	1.324	0.238	
1860.00	26140	Low	front	12 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	-0.03	1:1	0.245	1.282	0.314	
1860.00	26140	Low	front	12 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.02	1:1	0.181	1.324	0.240	
1860.00	26140	Low	bottom	18 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	-0.03	1:1	0.165	1.282	0.212	
1860.00	26140	Low	bottom	18 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	-0.01	1:1	0.125	1.324	0.166	
1860.00	26140	Low	right	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	25.0	23.92	0	0.09	1:1	0.492	1.282	0.631	
1860.00	26140	Low	right	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	24.0	22.78	1	0.00	1:1	0.378	1.324	0.500	
1882.50	26365	Mid	back	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	-0.03	1:1	0.705	1.250	0.881	
1882.50	26365	Mid	back	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	0.03	1:1	0.691	1.309	0.905	
1882.50	26365	Mid	front	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	-0.07	1:1	0.674	1.250	0.843	
1882.50	26365	Mid	front	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	-0.04	1:1	0.677	1.309	0.886	
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	50	19.0	17.90	0	0.00	1:1	1.450	1.288	1.868	
1882.50	26365	Mid	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	99	19.0	18.03	0	0.04	1:1	1.790	1.250	2.238	
1905.00	26590	High	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	1	50	19.0	17.77	0	-0.01	1:1	1.700	1.327	2.256	
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	25	19.0	17.81	0	0.01	1:1	1.590	1.315	2.091	
1882.50	26365	Mid	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	0	19.0	17.83	0	-0.01	1:1	1.780	1.309	2.330	
1905.00	26590	High	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	50	25	19.0	17.75	0	-0.02	1:1	1.850	1.334	2.468	A108
1860.00	26140	Low	bottom	0 mm	LTE Band 25 (PCS)	B	0794M	20	QPSK	100	0	19.0	17.77	0	0.00	1:1	1.730	1.327	2.296	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**	**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams

Table 11-85
LTE Band 41 UMPC Extremity SAR

MEASUREMENT RESULTS																						
Power Class	FREQUENCY			Side	Spacing	Mode	Antenna Config.	Serial Number	Bandwidth [MHz]	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
	MHz	Ch.																			
Power Class 3	2680.00	41490	High	back	14 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	-0.01	1:1.58	0.132	1.306	0.172	
Power Class 3	2680.00	41490	High	back	14 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	0.03	1:1.58	0.129	1.297	0.167	
Power Class 3	2680.00	41490	High	front	12 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	0.01	1:1.58	0.115	1.306	0.150	
Power Class 3	2680.00	41490	High	front	12 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	-0.04	1:1.58	0.114	1.297	0.148	
Power Class 3	2680.00	41490	High	bottom	18 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	-0.04	1:1.58	0.145	1.306	0.189	
Power Class 3	2680.00	41490	High	bottom	18 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	0.04	1:1.58	0.144	1.297	0.187	
Power Class 3	2680.00	41490	High	right	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	23.0	21.84	0	0.01	1:1.58	0.497	1.306	0.649	
Power Class 3	2680.00	41490	High	right	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	23.0	21.87	0	-0.03	1:1.58	0.500	1.297	0.649	
Power Class 3	2680.00	41490	High	back	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	0.00	1:1.58	0.938	1.102	1.034	
Power Class 3	2680.00	41490	High	back	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	0.00	1:1.58	0.925	1.146	1.060	
Power Class 3	2680.00	41490	High	front	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	-0.03	1:1.58	0.562	1.102	0.619	
Power Class 3	2680.00	41490	High	front	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	0.00	1:1.58	0.570	1.146	0.653	
Power Class 3	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	1	0	18.5	17.65	0	0.00	1:1.58	2.000	1.216	2.432	
Power Class 3	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	1	99	18.5	17.64	0	0.01	1:1.58	2.000	1.219	2.438	
Power Class 3	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	17.78	0	-0.02	1:1.58	2.100	1.180	2.478	
Power Class 3	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	17.78	0	0.00	1:1.58	2.080	1.180	2.454	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	1	50	18.5	18.08	0	-0.04	1:1.58	2.010	1.102	2.215	
Power Class 3	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	25	18.5	17.69	0	0.00	1:1.58	2.010	1.205	2.422	
Power Class 3	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.63	0	0.01	1:1.58	2.050	1.222	**2.505**	
Power Class 3	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	25	18.5	17.82	0	-0.01	1:1.58	2.110	1.169	2.467	A109
Power Class 3	2636.50	41055	Mid-High	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	0	18.5	17.72	0	-0.01	1:1.58	2.080	1.197	2.490	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	18.5	17.91	0	0.01	1:1.58	1.980	1.146	2.269	
Power Class 3	2680.00	41490	High	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	100	0	18.5	17.77	0	0.03	1:1.58	1.920	1.183	2.271	
Power Class 2	2549.50	40185	Low-Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	50	20.1	19.37	0	0.00	1:2.31	2.040	1.183	2.413	
Power Class 3	2506.00	39750	Low	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	25	18.5	17.69	0	0.02	1:1.58	1.950	1.205	2.350	
Power Class 3	2593.00	40620	Mid	bottom	0 mm	LTE Band 41	B	0417M	20	QPSK	50	25	18.5	17.82	0	0.04	1:1.58	2.020	1.169	2.361	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Note: Blue entries represent variability measurements.

Table 11-86
NR Band n12 UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g) (W/kg)	Scaling Factor	Reported SAR (10g) (W/kg)	Plot #
MHz	Ch.																					
707.50	141500	Mid	back	0 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.05	1:1	0.674	1.374	0.926	
707.50	141500	Mid	back	0 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.01	1:1	0.701	1.377	0.965	
707.50	141500	Mid	front	0 mm	NR Band n12	A+B	46	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.04	1:1	0.724	1.374	0.995	
707.50	141500	Mid	front	0 mm	NR Band n12	A+B	0	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.00	1:1	0.754	1.377	1.038	
707.50	141500	Mid	bottom	0 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.02	1:1	0.851	1.374	1.169	
707.50	141500	Mid	bottom	0 mm	NR Band n12	A+B	36	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	-0.01	1:1	0.868	1.377	1.195	A110
707.50	141500	Mid	bottom	0 mm	NR Band n12	A+B	36	0337M	15	CP-OFDM	QPSK	1	1	23.5	21.90	1.5	0.02	1:1	0.585	1.445	0.845	
707.50	141500	Mid	right	0 mm	NR Band n12	A+B	37	0337M	15	DFT-S-OFDM	QPSK	1	40	25.0	23.62	0	0.00	1:1	0.810	1.374	1.113	
707.50	141500	Mid	right	0 mm	NR Band n12	A+B	37	0337M	15	DFT-S-OFDM	QPSK	36	22	25.0	23.61	0	0.04	1:1	0.843	1.377	1.161	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT	UMPC Extremity
Spatial Peak	4.0 W/kg (mW/g)
Uncontrolled Exposure/General Population	averaged over 10 grams

Table 11-87
NR Band n5 UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Tune State	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																		(W/kg)		(W/kg)	
836.50	167300	Mid	back	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.01	1:1	1.020	1.222	1.246	
836.50	167300	Mid	back	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.00	1:1	1.090	1.230	1.341	A111
836.50	167300	Mid	back	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	CP-OFDM	QPSK	1	1	23.5	22.47	1.5	-0.01	1:1	0.744	1.268	0.943	
836.50	167300	Mid	front	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	0.02	1:1	0.688	1.222	0.841	
836.50	167300	Mid	front	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.01	1:1	0.722	1.230	0.888	
836.50	167300	Mid	bottom	0 mm	NR Band n5 (Cell)	A+B	36	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.01	1:1	0.663	1.222	0.810	
836.50	167300	Mid	bottom	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	0.09	1:1	0.692	1.230	0.851	
836.50	167300	Mid	right	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	1	53	25.0	24.13	0	-0.04	1:1	0.828	1.222	1.012	
836.50	167300	Mid	right	0 mm	NR Band n5 (Cell)	A+B	108	0344M	20	DFT-S-OFDM	QPSK	50	28	25.0	24.10	0	-0.01	1:1	0.864	1.230	1.063	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

Table 11-88
NR Band n66 UMPC Extremity SAR

MEASUREMENT RESULTS																						
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1720.00	344000	Low	back	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.03	1:1	0.216	1.076	0.232	
1720.00	344000	Low	back	14 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	-0.02	1:1	0.224	1.233	0.276	
1720.00	344000	Low	front	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.01	1:1	0.203	1.076	0.218	
1720.00	344000	Low	front	12 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.02	1:1	0.198	1.233	0.244	
1720.00	344000	Low	bottom	18 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	0.02	1:1	0.185	1.076	0.199	
1720.00	344000	Low	bottom	18 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.05	1:1	0.186	1.233	0.229	
1720.00	344000	Low	right	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	1	24.5	24.18	0	-0.06	1:1	0.958	1.076	1.031	
1720.00	344000	Low	right	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.59	0	0.00	1:1	1.030	1.233	1.270	
1745.00	349000	Mid	back	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.05	1:1	0.866	1.023	0.886	
1745.00	349000	Mid	back	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	0.04	1:1	0.894	1.012	0.905	
1745.00	349000	Mid	front	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.00	1:1	0.556	1.023	0.569	
1745.00	349000	Mid	front	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.05	1:1	0.606	1.012	0.613	
1745.00	349000	Mid	bottom	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	1	53	19.0	18.90	0	0.04	1:1	1.410	1.023	1.442	
1745.00	349000	Mid	bottom	0 mm	NR Band n66 (AWS)	B	0813M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.95	0	-0.01	1:1	1.480	1.012	1.498	
1745.00	349000	Mid	bottom	0 mm	NR Band n66 (AWS)	B	0813M	20	CP-OFDM	QPSK	1	1	19.0	18.90	0	0.00	1:1	1.480	1.023	1.514	
1770.00	354000	High	back	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.03	1:1	0.707	1.135	0.802	
1770.00	354000	High	back	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	0.04	1:1	0.744	1.132	0.842	
1770.00	354000	High	front	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	0.00	1:1	0.864	1.135	0.981	
1770.00	354000	High	front	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	-0.03	1:1	0.864	1.132	0.978	
1720.00	344000	Low	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.31	0	0.02	1:1	1.940	1.172	2.274	
1745.00	349000	Mid	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.42	0	0.01	1:1	1.920	1.143	2.195	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	1	104	20.0	19.45	0	-0.01	1:1	1.940	1.135	2.202	
1720.00	344000	Low	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.42	0	0.00	1:1	2.010	1.143	2.297	A112
1745.00	349000	Mid	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.44	0	0.00	1:1	1.930	1.138	2.196	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.46	0	0.00	1:1	1.990	1.132	2.253	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	100	0	20.0	19.44	0	0.01	1:1	1.980	1.138	2.253	
1770.00	354000	High	top	0 mm	NR Band n66 (AWS)	F	0777M	20	CP-OFDM	QPSK	1	1	20.0	19.48	0	0.02	1:1	1.990	1.127	2.243	
1720.00	344000	Low	top	0 mm	NR Band n66 (AWS)	F	0777M	20	DFT-S-OFDM	QPSK	50	56	20.0	19.42	0	-0.03	1:1	2.000	1.143	2.286	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population										UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

Note: Blue entry represents variability measurement.

Table 11-89
NR Band n25 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
1860.00	372000	Low	back	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.02	1:1	0.229	1.303	0.298	
1860.00	372000	Low	back	14 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	-0.06	1:1	0.227	1.265	0.287	
1860.00	372000	Low	front	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.00	1:1	0.195	1.303	0.254	
1860.00	372000	Low	front	12 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.00	1:1	0.200	1.265	0.253	
1860.00	372000	Low	bottom	18 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	0.00	1:1	0.215	1.303	0.280	
1860.00	372000	Low	bottom	18 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.03	1:1	0.214	1.265	0.271	
1860.00	372000	Low	right	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	24.5	23.35	0	-0.02	1:1	0.426	1.303	0.555	
1860.00	372000	Low	right	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	24.5	23.48	0	0.01	1:1	0.430	1.265	0.544	
1905.00	381000	High	back	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.03	1:1	1.080	1.219	1.317	
1905.00	381000	High	back	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.01	1:1	1.080	1.205	1.301	
1905.00	381000	High	front	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	0.02	1:1	0.656	1.219	0.800	
1905.00	381000	High	front	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	0.05	1:1	0.652	1.205	0.786	
1860.00	372000	Low	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	53	19.0	17.92	0	-0.01	1:1	1.500	1.282	1.923	
1882.50	376500	Mid	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.04	0	0.00	1:1	1.650	1.247	2.058	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	1	1	19.0	18.14	0	-0.01	1:1	1.660	1.219	2.024	
1860.00	372000	Low	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	56	19.0	18.18	0	0.01	1:1	1.500	1.208	1.812	
1882.50	376500	Mid	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	56	19.0	18.18	0	-0.02	1:1	1.670	1.208	2.017	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	50	28	19.0	18.19	0	-0.02	1:1	1.680	1.205	2.024	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	DFT-S-OFDM	QPSK	100	0	19.0	18.13	0	0.00	1:1	1.690	1.222	2.065	
1905.00	381000	High	bottom	0 mm	NR Band n25 (PCS)	B	0344M	20	CP-OFDM	QPSK	1	1	19.0	18.04	0	0.00	1:1	1.700	1.247	2.120	A113
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

Table 11-90
NR Band n41 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
2592.99	518598	Mid	back	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.06	1:1	0.383	1.148	0.440	
2592.99	518598	Mid	back	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	0.540	1.156	0.624	
2592.99	518598	Mid	front	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.00	1:1	0.567	1.148	0.651	
2592.99	518598	Mid	front	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	0.597	1.156	0.690	
2592.99	518598	Mid	top	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	1	271	19.0	18.40	0	0.02	1:1	1.600	1.148	1.837	A114
2592.99	518598	Mid	top	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	135	0	19.0	18.37	0	-0.01	1:1	1.590	1.156	1.838	
2592.99	518598	Mid	top	0 mm	NR Band n41	F	0646M	100	DFT-S-OFDM	QPSK	270	0	19.0	18.34	0	-0.01	1:1	1.560	1.164	1.816	
2592.99	518598	Mid	top	0 mm	NR Band n41	F	0646M	100	CP-OFDM	QPSK	1	1	19.0	18.20	0	-0.07	1:1	1.430	1.202	1.719	
2592.99	518598	Mid	back	0 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.06	1:1	0.861	1.355	1.167	
2592.99	518598	Mid	front	0 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	-0.07	1:1	0.454	1.355	0.615	
2592.99	518598	Mid	bottom	0 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.07	1:1	1.570	1.355	2.127	
2592.99	518598	Mid	right	0 mm	NR Band n41	B	0820M	100	CW/SRS	N/A	N/A	N/A	16.0	14.68	N/A	0.00	1:1	0.166	1.355	0.225	
2592.99	518598	Mid	back	0 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	-0.08	1:1	0.053	1.253	0.066	
2592.99	518598	Mid	front	0 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	-0.11	1:1	0.065	1.253	0.081	
2592.99	518598	Mid	top	0 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.07	1:1	0.078	1.253	0.098	
2592.99	518598	Mid	right	0 mm	NR Band n41	E	0328M	100	CW/SRS	N/A	N/A	N/A	16.0	15.02	N/A	0.03	1:1	0.043	1.253	0.054	
2592.99	518598	Mid	back	0 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	-0.05	1:1	0.068	1.303	0.089	
2592.99	518598	Mid	front	0 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	0.09	1:1	0.018	1.303	0.023	
2592.99	518598	Mid	bottom	0 mm	NR Band n41	C	0328M	100	CW/SRS	N/A	N/A	N/A	12.0	10.85	N/A	-0.11	1:1	0.092	1.303	0.120	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams												

Table 11-91
NR Band n77 UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY			Side	Spacing	Mode	Antenna Config	Serial Number	Bandwidth [MHz]	Waveform	Modulation	RB Size	RB Offset	Maximum Allowed Power [dBm]	Conducted Power [dBm]	MPR [dB]	Power Drift [dB]	Duty Cycle	SAR (10g)	Scaling Factor	Reported SAR (10g)	Plot #
MHz	Ch.																	(W/kg)		(W/kg)	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.05	1:1	0.621	1.109	0.689	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	-0.02	1:1	0.628	1.172	0.736	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	0.01	1:1	0.951	1.109	1.055	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.02	1:1	0.962	1.172	1.127	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	270	0	18.5	17.72	0	-0.01	1:1	1.050	1.197	1.257	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.05	0	-0.02	1:1	1.870	1.109	2.074	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	135	138	18.5	17.81	0	0.04	1:1	1.900	1.172	2.227	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	F	0646M	100	DFT-S-OFDM	QPSK	270	0	18.5	17.72	0	-0.07	1:1	1.990	1.197	2.382	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	0.01	1:1	2.000	1.216	2.432	A115
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.01	1:1	0.348	1.282	0.446	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.06	1:1	0.342	1.285	0.439	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.04	1:1	0.923	1.282	1.183	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	-0.04	1:1	0.841	1.285	1.081	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	0.02	1:1	1.370	1.282	1.756	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.06	1:1	1.310	1.285	1.683	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	16.79	0	0.03	1:1	1.340	1.321	1.770	
3500.01	633334	Mid	right	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	1	1	18.0	16.92	0	-0.02	1:1	0.998	1.282	1.279	
3500.01	633334	Mid	right	0 mm	NR Band n77 DoD	E	0010M	100	DFT-S-OFDM	QPSK	135	0	18.0	16.91	0	0.10	1:1	0.749	1.285	0.962	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	-0.01	1:1	0.064	1.479	0.095	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.10	1:1	0.097	1.479	0.143	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	0.00	1:1	0.323	1.479	0.478	
3500.01	633334	Mid	right	0 mm	NR Band n77 DoD	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.30	N/A	-0.03	1:1	0.022	1.479	0.033	
3500.01	633334	Mid	back	0 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.04	1:1	0.271	1.054	0.286	
3500.01	633334	Mid	front	0 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	-0.07	1:1	0.145	1.054	0.153	
3500.01	633334	Mid	bottom	0 mm	NR Band n77 DoD	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.77	N/A	0.01	1:1	0.202	1.054	0.213	
3500.01	633334	Mid	top	0 mm	NR Band n77 DoD	F	0646M	100	CP-OFDM	QPSK	1	1	18.5	17.65	0	0.02	1:1	2.000	1.216	2.432	
3930.00	662000	High	back	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.01	1:1	0.468	1.005	0.470	
3930.00	662000	High	back	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.01	1:1	0.616	1.019	0.628	
3930.00	662000	High	front	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.01	1:1	0.857	1.005	0.861	
3930.00	662000	High	front	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	-0.02	1:1	0.679	1.019	0.692	
3750.00	650000	Low	top	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	137	18.5	18.00	0	-0.03	1:1	1.440	1.122	1.616	
3930.00	662000	High	top	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	1	271	18.5	18.48	0	0.06	1:1	1.200	1.005	1.206	
3750.00	650000	Low	top	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	0	18.5	17.91	0	-0.02	1:1	1.520	1.146	1.742	A116
3930.00	662000	High	top	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	135	69	18.5	18.42	0	0.08	1:1	1.510	1.019	1.539	
3930.00	662000	High	top	0 mm	NR Band n77	F	0337M	100	DFT-S-OFDM	QPSK	270	0	18.5	18.29	0	0.02	1:1	1.290	1.050	1.355	
3930.00	662000	High	top	0 mm	NR Band n77	F	0337M	100	CP-OFDM	QPSK	1	1	18.5	17.85	0	0.00	1:1	1.260	1.161	1.463	
3930.00	662000	High	back	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.04	1:1	0.526	1.102	0.580	
3930.00	662000	High	back	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	-0.01	1:1	0.525	1.127	0.592	
3930.00	662000	High	front	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	-0.06	1:1	0.869	1.102	0.958	
3930.00	662000	High	front	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.03	1:1	0.885	1.127	0.997	
3750.00	650000	Low	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.12	0	-0.07	1:1	1.240	1.225	1.519	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.04	1:1	1.420	1.102	1.565	
3750.00	650000	Low	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	138	18.0	17.00	0	-0.03	1:1	1.320	1.259	1.662	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.02	1:1	1.450	1.127	1.634	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	270	0	18.0	17.39	0	-0.02	1:1	1.450	1.151	1.669	
3930.00	662000	High	top	0 mm	NR Band n77	E	0010M	100	CP-OFDM	QPSK	1	1	18.0	17.10	0	-0.01	1:1	1.510	1.230	1.857	
3930.00	662000	High	right	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	1	137	18.0	17.58	0	0.13	1:1	0.272	1.102	0.300	
3930.00	662000	High	right	0 mm	NR Band n77	E	0010M	100	DFT-S-OFDM	QPSK	135	69	18.0	17.48	0	0.03	1:1	0.277	1.127	0.312	
3930.00	662000	High	back	0 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.00	1:1	0.065	1.047	0.068	
3930.00	662000	High	front	0 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	0.05	1:1	0.076	1.047	0.080	
3930.00	662000	High	top	0 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	-0.10	1:1	0.166	1.047	0.174	
3930.00	662000	High	right	0 mm	NR Band n77	G	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	15.80	N/A	-0.04	1:1	0.019	1.047	0.020	
3750.00	650000	Low	back	0 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	0.00	1:1	0.363	1.365	0.495	
3750.00	650000	Low	front	0 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	-0.02	1:1	0.143	1.365	0.195	
3750.00	650000	Low	bottom	0 mm	NR Band n77	D	0337M	100	CW/SRS	N/A	N/A	N/A	16.0	14.65	N/A	-0.02	1:1	0.185	1.365	0.253	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									UMPC Extremity 4 W/kg (mW/g) averaged over 10 grams												

Note: Blue entry represents variability measurement.

Table 11-92
DTS SISO WLAN Max UMPC Extremity SAR

MEASUREMENT RESULTS																			
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2412	1	back	0 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.08	98.85	2.250	0.727	1.000	1.012	0.736	
2412	1	front	0 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	0.01	98.85	2.050	0.517	1.000	1.012	0.523	
2412	1	bottom	0 mm	802.11b	DSSS	2	0436M	22	1	19.0	19.00	-0.01	98.85	3.200	0.893	1.000	1.012	**0.904**	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**											**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams								

Table 11-93
DTS SISO WLAN Red UMPC Extremity SAR

MEASUREMENT RESULTS																			
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.													W/kg	(W/kg)			(W/kg)	
2437	6	back	0 mm	802.11b	DSSS	2	0436M	22	1	15.0	14.79	0.02	98.85	1.900	0.364	1.050	1.012	0.387	
2437	6	front	0 mm	802.11b	DSSS	2	0436M	22	1	15.0	14.79	0.12	98.85	0.219	0.061	1.050	1.012	0.065	
2437	6	bottom	0 mm	802.11b	DSSS	2	0436M	22	1	15.0	14.79	-0.03	98.85	1.720	0.425	1.050	1.012	0.452	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**											**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams								

Note: 2.4 GHz WLAN was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN, or 5G NR. 5/6 GHz WIFI. 5G NR was not transmitting during the above evaluations.

Table 11-94
DTS and NII MIMO Max WLAN UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2412	1	back	0 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.01	98.85	2.840	0.835	1.035	1.012	0.875	
2412	1	front	0 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.01	98.85	3.190	0.821	1.035	1.012	0.860	
2412	1	top	0 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	0.02	98.85	4.530	1.270	1.035	1.012	1.330	A117
2412	1	bottom	0 mm	802.11b	DSSS	MIMO	0436M	22	1	19.0	18.85	19.0	18.92	-0.02	98.85	2.890	0.820	1.035	1.012	0.859	
5260	52	back	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	-0.09	97.92	2.250	0.501	1.107	1.021	0.566	
5260	52	front	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	0.00	97.92	2.340	0.485	1.107	1.021	0.548	
5260	52	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	0.03	97.92	5.940	1.010	1.107	1.021	1.142	
5260	52	bottom	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.56	18.0	17.69	-0.08	97.92	4.690	0.476	1.107	1.021	0.538	
5720	144	back	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	-0.02	97.92	3.260	0.721	1.096	1.021	0.897	
5720	144	front	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	-0.03	97.92	2.780	0.675	1.096	1.021	0.840	
5720	144	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	0.03	97.92	6.450	1.100	1.096	1.021	1.369	
5720	144	bottom	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.60	18.0	17.14	-0.03	97.92	4.920	0.699	1.096	1.021	0.870	
5825	165	back	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.01	97.92	4.260	0.896	1.069	1.021	1.100	
5825	165	front	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	0.01	97.92	2.710	0.721	1.069	1.021	0.885	
5825	165	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.02	97.92	7.330	1.280	1.069	1.021	1.571	A118
5825	165	bottom	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.71	18.0	17.20	-0.05	97.92	7.950	0.891	1.069	1.021	1.093	
5845	169	back	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	-0.03	97.92	3.000	0.874	1.086	1.021	1.111	
5845	169	front	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.20	97.92	2.510	0.664	1.086	1.021	0.844	
5845	169	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	-0.03	97.92	7.360	1.270	1.086	1.021	**1.614**	
5865	173	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.02	18.0	16.99	0.00	97.92	6.930	1.060	1.253	1.021	1.366	
5885	177	top	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.00	18.0	16.92	0.01	97.92	7.120	1.100	1.259	1.021	1.440	
5845	169	bottom	0 mm	802.11n	OFDM	MIMO	0441M	20	13	18.0	17.64	18.0	17.05	0.00	97.92	6.470	0.908	1.086	1.021	1.154	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

Note: To achieve the 22.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 19.0 dBm

To achieve the 21.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 18.0 dBm

Table 11-95
DTS and NII MIMO WLAN Red UMPC Extremity SAR

MEASUREMENT RESULTS																					
FREQUENCY		Side	Spacing	Mode	Service	Antenna Config.	Device Serial Number	Bandwidth [MHz]	Data Rate (Mbps)	Maximum Allowed Power (Ant 1) [dBm]	Conducted Power (Ant 1) [dBm]	Maximum Allowed Power (Ant 2) [dBm]	Conducted Power (Ant 2) [dBm]	Power Drift [dB]	Duty Cycle (%)	Peak SAR of Area Scan	SAR (10g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.															W/kg	(W/kg)			(W/kg)	
2462	11	back	0 mm	802.11n	OFDM	MIMO	0436M	20	13	15.0	14.82	15.0	14.78	-0.05	97.70	1.540	0.327	1.042	1.024	0.352	
2462	11	front	0 mm	802.11n	OFDM	MIMO	0436M	20	13	15.0	14.82	15.0	14.78	0.01	97.70	1.340	0.311	1.042	1.024	0.335	
2462	11	top	0 mm	802.11n	OFDM	MIMO	0436M	20	13	15.0	14.82	15.0	14.78	-0.04	97.70	1.890	0.485	1.042	1.024	0.522	
2462	11	bottom	0 mm	802.11n	OFDM	MIMO	0436M	20	13	15.0	14.82	15.0	14.78	-0.07	97.70	1.560	0.377	1.042	1.024	0.406	
5290	58	back	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.45	15.0	14.12	-0.05	92.82	1.020	0.225	1.135	1.077	0.297	
5290	58	front	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.45	15.0	14.12	-0.01	92.82	1.410	0.214	1.135	1.077	0.282	
5290	58	top	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.45	15.0	14.12	-0.01	92.82	2.650	0.508	1.135	1.077	0.670	
5290	58	bottom	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.45	15.0	14.12	-0.02	92.82	1.770	0.197	1.135	1.077	0.260	
5530	106	back	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.72	15.0	14.00	0.04	92.82	1.040	0.158	1.067	1.077	0.214	
5530	106	front	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.72	15.0	14.00	0.00	92.82	1.140	0.279	1.067	1.077	0.378	
5530	106	top	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.72	15.0	14.00	-0.01	92.82	4.650	0.685	1.067	1.077	0.929	
5530	106	bottom	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.72	15.0	14.00	-0.01	92.82	1.620	0.200	1.067	1.077	0.271	
5775	155	back	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.69	15.0	14.17	0.03	92.82	1.340	0.283	1.074	1.077	0.369	
5775	155	front	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.69	15.0	14.17	-0.02	92.82	2.170	0.434	1.074	1.077	0.566	
5775	155	top	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.69	15.0	14.17	0.00	92.82	4.320	0.697	1.074	1.077	0.909	
5775	155	bottom	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.69	15.0	14.17	0.01	92.82	3.400	0.429	1.074	1.077	0.560	
5855	171	back	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.81	15.0	14.32	-0.14	92.82	1.630	0.351	1.045	1.077	0.442	
5855	171	front	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.81	15.0	14.32	0.01	92.82	1.690	0.377	1.045	1.077	0.475	
5855	171	top	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.81	15.0	14.32	-0.05	92.82	5.380	0.768	1.045	1.077	0.967	
5855	171	bottom	0 mm	802.11ac	OFDM	MIMO	0436M	80	58.5	15.0	14.81	15.0	14.32	-0.02	92.82	3.710	0.470	1.045	1.077	0.592	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population											UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams										

To achieve the 18.0 dBm maximum allowed MIMO power shown in the documentation, each antenna transmits at a maximum allowed power of 15.0 dBm

2.4 GHz WLAN and 5GHz was additionally evaluated at the maximum allowed output power during simultaneous operations with 5/6 GHz WLAN/5G NR or 2.4 GHz WLAN/5G NR respectively. 5G NR was not transmitting during 2.4/5 GHz WLAN evaluations. 5GHz/6GHz WLAN was not transmitting during 2.4 GHz WLAN evaluations and vice versa.

Table 11-96
DSS UMPC Extremity SAR

MEASUREMENT RESULTS																
FREQUENCY		Side	Test Position	Mode	Service	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Duty Cycle (%)	SAR (10g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (10g)	Plot #
MHz	Ch.												(W/kg)			(W/kg)	
2441	39	back	0 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	-0.01	76.80	0.571	1.183	1.302	0.879	
2441	39	front	0 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.01	76.80	0.499	1.183	1.302	0.769	
2441	39	top	0 mm	Bluetooth	FHSS	1	0436M	1	19.5	18.77	0.02	76.80	0.757	1.183	1.302	1.166	A119
2441	39	back	0 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	0.01	76.80	0.166	1.042	1.302	0.225	
2441	39	front	0 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.01	76.80	0.140	1.042	1.302	0.190	
2441	39	bottom	0 mm	Bluetooth	FHSS	2	0436M	1	16.0	15.82	-0.02	76.80	0.229	1.042	1.302	0.311	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams

Table 11-97
NFC UMPC Extremity SAR

MEASUREMENT RESULTS									
FREQUENCY	Side	Test Position	Mode	Type	Antenna Config.	Device Serial Number	Power Drift [dB]	SAR (10g)	Plot #
MHz								(W/kg)	
13.56	back	0 mm	NFC	B	NFC	0374M	-0.03	0.009	A120
13.56	front	0 mm	NFC	B	NFC	0374M	0.08	0.000	
13.56	right	0 mm	NFC	B	NFC	0374M	0.04	0.000	

ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	UMPC Extremity 4.0 W/kg (mW/g) averaged over 10 grams

11.7 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 15 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 D04v01r03, 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 12 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 6.7 for more details).
10. Per FCC KDB Publication 648474 D04v01r03, this device is considered a "phablet" when it is in closed configuration since the diagonal dimension is > 160 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 13 for supplemental data.
12. Additional SAR tests for phablet SAR were evaluated per KDB 616217 Section 6 (See Section 6.9 for more information).
13. 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.
14. This device uses Qualcomm Smart Transmit for 2G/3G/4G/5G 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).
15. Per FCC KDB Publication 941225 D07v01r02, this device is considered a "UMPC mini-tablet" when it is in open configuration. UMPC body 1g SAR tests are required on all surfaces and edges ≤ 25 mm from a transmitting antenna. Therefore, to address hand exposure, UMPC extremity 10g SAR tests are required at a test separation distance of 0 mm for all measured 1g SAR (at 10 mm) configurations.

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 8.5.4.
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, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.
7. 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 FCC Guidance, all SAR tests were performed using Power Class 3. SAR with power class 2 at the available duty factor was additionally performed for the power class 3 configuration with the highest SAR configuration for each exposure conditions. Please see Section 13 for linearity results.

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.

WLAN Notes:

1. For held-to-ear, hotspot, phablet, and UMPC mini-tablet 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 8.6.5 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 8.6.6 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 Appendix E 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.

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 100% transmission duty factor to determine compliance. See Section 9 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.

12 SAR MEASUREMENT VARIABILITY

12.1 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 12-1
Phablet SAR Measurement Variability Results

PHABLET VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1720.00	132072	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	top	0 mm	F	2.040	2.030	1.00	N/A	N/A	N/A	N/A
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 12-2
UMPC Extremity SAR Measurement Variability Results

UMPC EXTREMITY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
2450	2506.00	39750	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	bottom	0 mm	B	2.010	1.950	1.03	N/A	N/A	N/A	N/A
2600	2593.00	40620	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 25 RB Offset	bottom	0 mm	B	2.110	2.020	1.04	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT **Spatial Peak** **Uncontrolled Exposure/General Population**					**UMPC Extremity** **4.0 W/kg (mW/g)** averaged over 10 grams									

UMPC EXTREMITY VARIABILITY RESULTS														
Band	FREQUENCY		Mode	Service	Side	Spacing	Antenna Config	Measured SAR (10g)	1st Repeated SAR (10g)	Ratio	2nd Repeated SAR (10g)	Ratio	3rd Repeated SAR (10g)	Ratio
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)	
1750	1720.00	344000	NR Band n66 (AWS), 20 MHz Bandwidth	DFT-S-OFDM, QPSK, 50 RB, 56 RB Offset	top	0 mm	F	2.010	2.000	1.01	N/A	N/A	N/A	N/A
3500	3500.01	633334	NR Band n77 DoD, 100 MHz Bandwidth	CP-OFDM, QPSK, 1 RB, 1 RB Offset	top	0 mm	F	2.000	2.000	1.00	N/A	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT) **Spatial Peak** **Uncontrolled Exposure/General Population**					**UMPC EXTREMITY** **4.0 W/kg (mW/g)** averaged over 10 grams									

12.2 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.

13 ADDITIONAL TESTING PER FCC GUIDANCE

13.1 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 144 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 144 states.

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

Table 13-1
UMTS Supplemental Head SAR Data

Supplemental Body SAR Data			
UMTS B5 Ant A		UMTS B5 Ant A + Ant B	
RMC		RMC	
Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	826.40	Frequency (MHz)	826.40
Channel	4132	Channel	4132
Measured 1g SAR (W/kg)	0.289	Measured 1g SAR (W/kg)	0.434
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 9)	0.431	Auto-tune (State 38)	0.729
Default (State 9)	0.448	Default (State 36)	0.785
State 9	0.448	State 11	0.589
State 10	0.426	State 31	0.291
State 26	0.053	State 38	0.746
State 30	0.328	State 51	0.201
State 46	0.403	State 55	0.536
State 50	0.253	State 60	0.163
State 57	0.329	State 71	0.025
State 70	0.064	State 81	0.648
State 90	0.431	State 91	0.538
State 110	0.300	State 111	0.620
State 130	0.247	State 131	0.269

Table 13-2
LTE Supplemental Head SAR Data

Supplemental Body SAR Data											
LTE B12 Ant A		LTE B12 Ant A + Ant B		LTE B13 Ant A		LTE B13 Ant A + Ant B		LTE B26 Ant A		LTE B26 Ant A + Ant B	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Right	Test Position	Back	Test Position	Right	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	707.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	831.50
Channel	23095	Channel	23095	Channel	23230	Channel	23230	Channel	26865	Channel	26865
Measured 1g SAR (W/kg)	0.252	Measured 1g SAR (W/kg)	0.360	Measured 1g SAR (W/kg)	0.209	Measured 1g SAR (W/kg)	0.258	Measured 1g SAR (W/kg)	0.223	Measured 1g SAR (W/kg)	0.504
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)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 58)	0.361	Auto-tune (State 0)	0.583	Auto-tune (State 9)	0.328	Auto-tune (State 0)	0.435	Auto-tune (State 9)	0.360	Auto-tune (State 108)	0.771
Default (State 45)	0.348	Default (State 0)	0.588	Default (State 18)	0.313	Default (State 0)	0.412	Default (State 9)	0.372	Default (State 36)	0.779
State 10	0.367	State 13	0.518	State 1	0.251	State 1	0.394	State 16	0.078	State 0	0.759
State 12	0.365	State 33	0.117	State 9	0.316	State 15	0.126	State 24	0.129	State 17	0.068
State 32	0.193	State 36	0.557	State 14	0.206	State 28	0.302	State 36	0.362	State 21	0.482
State 46	0.366	State 41	0.232	State 19	0.302	State 35	0.023	State 51	0.116	State 37	0.762
State 48	0.359	State 53	0.055	State 34	0.058	State 44	0.028	State 56	0.306	State 57	0.463
State 52	0.116	State 54	0.564	State 38	0.215	State 55	0.350	State 63	0.326	State 77	0.504
State 58	0.357	State 73	0.417	State 54	0.310	State 75	0.270	State 64	0.296	State 97	0.066
State 72	0.307	State 93	0.469	State 74	0.190	State 95	0.175	State 76	0.211	State 103	0.229
State 108	0.290	State 108	0.511	State 94	0.208	State 108	0.401	State 96	0.091	State 108	0.772
State 112	0.159	State 113	0.191	State 114	0.048	State 115	0.032	State 116	0.024	State 117	0.659
State 132	0.157	State 133	0.071	State 134	0.028	State 135	0.337	State 136	0.278	State 137	0.302

Table 13-3
NR Supplemental Head SAR Data

Supplemental Head SAR Data				Supplemental Head SAR Data			
NR Band n12 Ant A		NR Band n12 Ant A + Ant B		NR Band n5 Ant A		NR Band n5 Ant A + Ant B	
DFTs-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFTs-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFTs-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset		DFTs-OFDM QPSK, 20 MHz Bandwidth, 1 RB, 53 RB Offset	
Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Right Cheek	Test Position	Left Cheek
Frequency (MHz)	707.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	836.50
Channel	141500	Channel	141500	Channel	167300	Channel	167300
Measured 1g SAR (W/kg)	0.081	Measured 1g SAR (W/kg)	0.127	Measured 1g SAR (W/kg)	0.100	Measured 1g SAR (W/kg)	0.075
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 45)	0.080	Auto-tune (State 36)	0.134	Auto-tune (State 9)	0.102	Auto-tune (State 108)	0.085
Default (State 45)	0.083	Default (State 1)	0.126	Default (State 9)	0.104	Default (State 108)	0.087
State 0	0.078	State 8	0.009	State 8	0.008	State 4	0.069
State 27	0.055	State 35	0.003	State 28	0.089	State 9	0.070
State 45	0.083	State 36	0.136	State 48	0.072	State 20	0.060
State 56	0.085	State 65	0.081	State 68	0.047	State 29	0.041
State 76	0.034	State 67	0.066	State 73	0.073	State 49	0.051
State 85	0.074	State 89	0.007	State 88	0.011	State 62	0.003
State 104	0.055	State 99	0.082	State 108	0.094	State 69	0.008
State 107	0.006	State 108	0.130	State 111	0.052	State 89	0.002
State 128	0.081	State 132	0.025	State 128	0.071	State 109	0.071
State 142	0.011	State 134	0.006	State 136	0.077	State 129	0.046

Table 13-4
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data			
UMTS B5 Ant A		UMTS B5 Ant A + Ant B	
RMC		RMC	
Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	826.40	Frequency (MHz)	826.40
Channel	4132	Channel	4132
Measured 1g SAR (W/kg)	0.289	Measured 1g SAR (W/kg)	0.434
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 9)	0.431	Auto-tune (State 38)	0.729
Default (State 9)	0.448	Default (State 36)	0.785
State 9	0.448	State 11	0.589
State 10	0.426	State 31	0.291
State 26	0.053	State 38	0.746
State 30	0.328	State 51	0.201
State 46	0.403	State 55	0.536
State 50	0.253	State 60	0.163
State 57	0.329	State 71	0.025
State 70	0.064	State 81	0.648
State 90	0.431	State 91	0.538
State 110	0.300	State 111	0.620
State 130	0.247	State 131	0.269

Table 13-5
LTE Supplemental Body SAR Data

Supplemental Body SAR Data											
LTE B12 Ant A		LTE B12 Ant A + Ant B		LTE B13 Ant A		LTE B13 Ant A + Ant B		LTE B26 Ant A		LTE B26 Ant A + Ant B	
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offset	
Test Position	Right	Test Position	Back	Test Position	Right	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	707.50	Frequency (MHz)	707.50	Frequency (MHz)	782.00	Frequency (MHz)	782.00	Frequency (MHz)	831.50	Frequency (MHz)	831.50
Channel	23095	Channel	23095	Channel	23230	Channel	23230	Channel	26865	Channel	26865
Measured 1g SAR (W/kg)	0.252	Measured 1g SAR (W/kg)	0.360	Measured 1g SAR (W/kg)	0.209	Measured 1g SAR (W/kg)	0.258	Measured 1g SAR (W/kg)	0.223	Measured 1g SAR (W/kg)	0.504
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)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 58)	0.361	Auto-tune (State 0)	0.583	Auto-tune (State 9)	0.328	Auto-tune (State 0)	0.435	Auto-tune (State 9)	0.360	Auto-tune (State 108)	0.771
Default (State 45)	0.348	Default (State 0)	0.588	Default (State 18)	0.313	Default (State 0)	0.412	Default (State 9)	0.372	Default (State 36)	0.779
State 10	0.367	State 13	0.518	State 1	0.251	State 1	0.394	State 16	0.078	State 0	0.759
State 12	0.365	State 33	0.117	State 9	0.316	State 15	0.126	State 24	0.129	State 17	0.068
State 32	0.193	State 36	0.557	State 14	0.206	State 28	0.302	State 36	0.362	State 21	0.482
State 46	0.366	State 41	0.232	State 19	0.302	State 35	0.023	State 51	0.116	State 37	0.762
State 48	0.359	State 53	0.055	State 34	0.058	State 44	0.028	State 56	0.306	State 57	0.463
State 52	0.116	State 54	0.564	State 38	0.215	State 55	0.350	State 63	0.326	State 77	0.504
State 58	0.357	State 73	0.417	State 54	0.310	State 75	0.270	State 64	0.296	State 97	0.066
State 72	0.307	State 93	0.469	State 74	0.190	State 95	0.175	State 76	0.211	State 103	0.229
State 108	0.290	State 108	0.511	State 94	0.208	State 108	0.401	State 96	0.091	State 108	0.772
State 112	0.159	State 113	0.191	State 114	0.048	State 115	0.032	State 116	0.024	State 117	0.659
State 132	0.157	State 133	0.071	State 134	0.028	State 135	0.337	State 136	0.278	State 137	0.302

Table 13-6
NR Supplemental Body SAR Data

Supplemental Body SAR Data							
NR Band n12 Ant A		NR Band n12 Ant A + Ant B		NR Band n5 Ant A		NR Band n5 Ant A + Ant B	
DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 15 MHz Bandwidth, 36 RB, 22 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset		DFT-s-OFDM QPSK, 20 MHz Bandwidth, 50 RB, 28 RB Offset	
Test Position	Right	Test Position	Back	Test Position	Back	Test Position	Back
Spacing	10 mm	Spacing	10 mm	Spacing	10 mm	Spacing	10 mm
Frequency (MHz)	707.50	Frequency (MHz)	707.50	Frequency (MHz)	836.50	Frequency (MHz)	836.50
Channel	141500	Channel	141500	Channel	167300	Channel	167300
Measured 1g SAR (W/kg)	0.206	Measured 1g SAR (W/kg)	0.303	Measured 1g SAR (W/kg)	0.196	Measured 1g SAR (W/kg)	0.410
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 10)	0.232	Auto-tune (State 0)	0.337	Auto-tune (State 45)	0.218	Auto-tune (State 108)	0.545
Default (State 45)	0.233	Default (State 0)	0.326	Default (State 9)	0.215	Default (State 36)	0.544
State 10	0.237	State 0	0.326	State 12	0.172	State 0	0.537
State 14	0.194	State 11	0.325	State 18	0.212	State 2	0.528
State 17	0.047	State 18	0.288	State 38	0.156	State 19	0.367
State 42	0.045	State 47	0.323	State 45	0.218	State 36	0.544
State 58	0.221	State 49	0.290	State 58	0.139	State 39	0.480
State 70	0.030	State 77	0.133	State 78	0.041	State 59	0.238
State 92	0.228	State 86	0.225	State 98	0.018	State 79	0.100
State 95	0.186	State 101	0.223	State 112	0.098	State 99	0.276
State 118	0.224	State 119	0.306	State 118	0.165	State 108	0.525
State 125	0.044	State 123	0.109	State 122	0.085	State 119	0.407
State 141	0.057	State 143	0.014	State 138	0.129	State 139	0.152

13.2 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 13-7
LTE Band 41 Head Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.00	24.60
Measured Output Power (dBm)	21.84	23.72
Measured SAR (W/kg)	0.035	0.038
Measured Power (mW)	152.76	235.50
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	96.69	101.97
% deviation from expected linearity		2.95%

Figure 13-1
LTE Band 41 Head Linearity

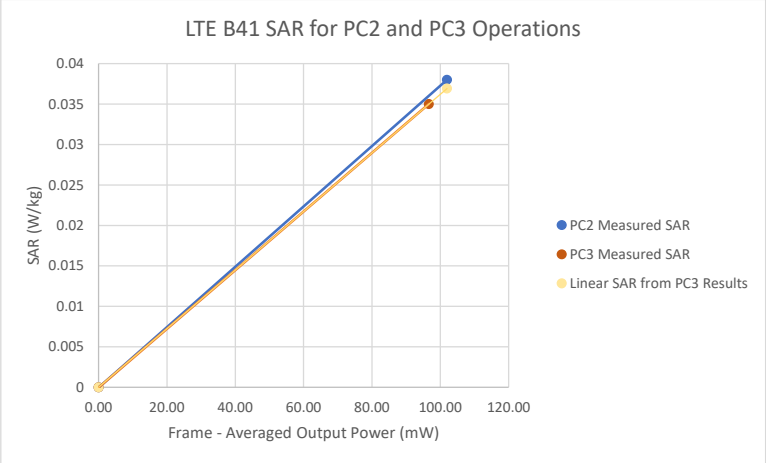


Table 13-8
LTE Band 41 Body-Worn Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	23.00	24.60
Measured Output Power (dBm)	21.84	23.72
Measured SAR (W/kg)	0.279	0.273
Measured Power (mW)	152.76	235.50
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	96.69	101.97
% deviation from expected linearity		-7.22%

Figure 13-2
LTE Band 41 Body-Worn Linearity

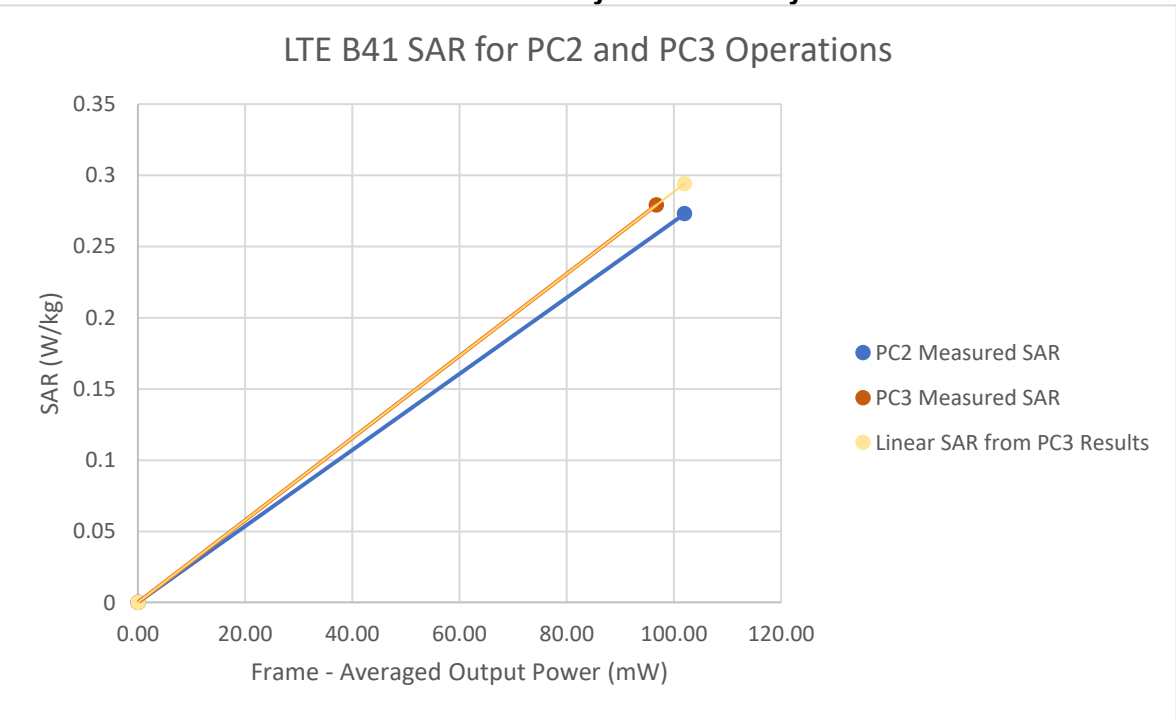


Table 13-9
LTE Band 41 Hotspot Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	18.50	20.10
Measured Output Power (dBm)	17.91	19.60
Measured SAR (W/kg)	0.373	0.343
Measured Power (mW)	61.80	91.20
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	39.12	39.49
% deviation from expected linearity		-8.90%

Figure 13-3
LTE Band 41 Hotspot Linearity

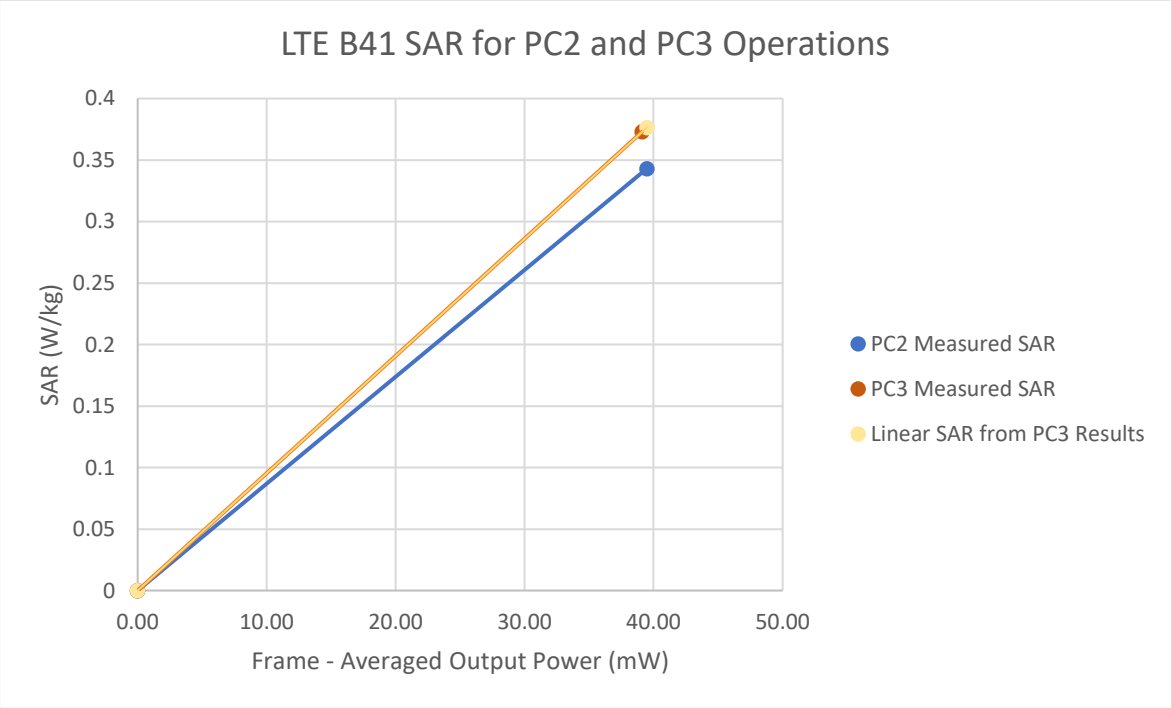


Table 13-10
LTE Band 41 Phablet Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	18.50	20.10
Measured Output Power (dBm)	17.72	19.39
Measured SAR (W/kg)	1.830	1.870
Measured Power (mW)	59.16	86.90
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	37.45	37.63
% deviation from expected linearity		1.70%

Figure 13-4
LTE Band 41 Phablet Linearity

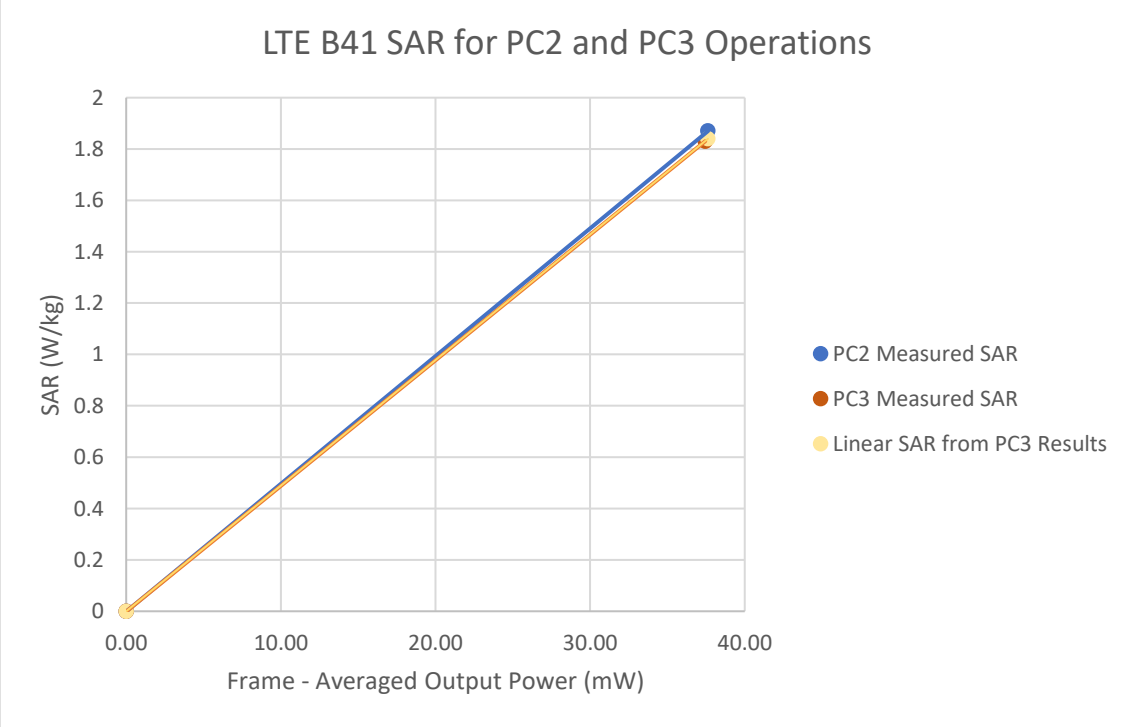


Table 13-11
LTE Band 41 UMPC Body Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	18.50	20.10
Measured Output Power (dBm)	18.08	19.73
Measured SAR (W/kg)	0.363	0.363
Measured Power (mW)	64.27	93.97
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	40.68	40.69
% deviation from expected linearity		-0.02%

Figure 13-5
LTE Band 41 UMPC Body Linearity

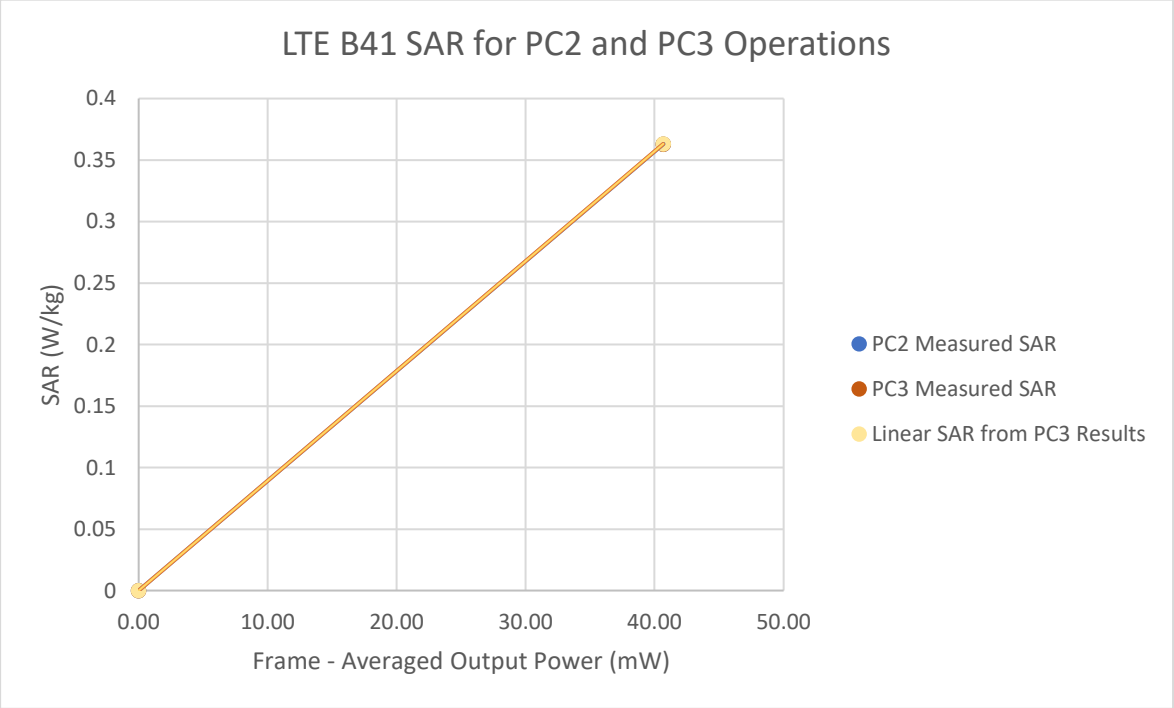
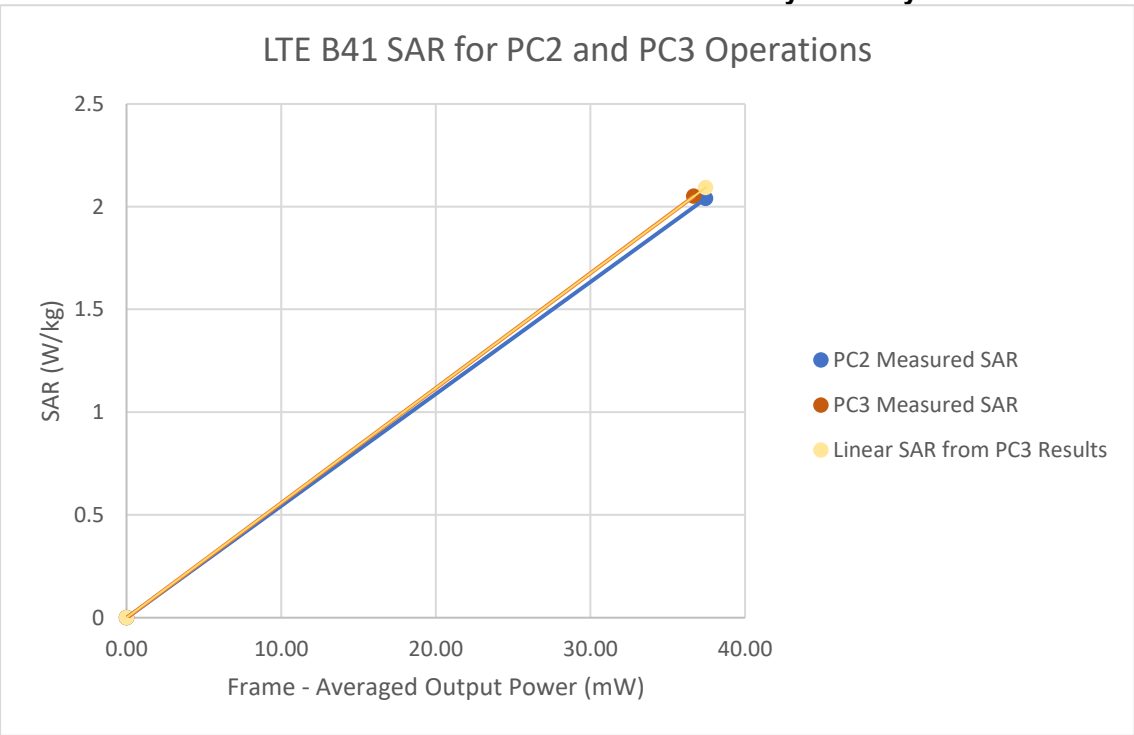


Table 13-12
LTE Band 41 UMPC Extremity Linearity Data

	LTE Band 41 PC3	LTE Band 41 PC2
Maximum Allowed Output Power (dBm)	18.50	20.10
Measured Output Power (dBm)	17.63	19.37
Measured SAR (W/kg)	2.050	2.040
Measured Power (mW)	57.94	86.50
Duty Cycle	63.3%	43.3%
Frame Averaged Output Power (mW)	36.68	37.45
% deviation from expected linearity		-2.55%

Figure 13-6
LTE Band 41 UMPC Extremity Linearity



14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial #
Agilent	8753ES	S-Parameter Vector Network Analyzer	12/17/2021	Annual	12/17/2022	MY40000670
Agilent	E4438C	ESG Vector Signal Generator	1/18/2022	Annual	1/18/2023	MY42081752
Agilent	E4440A	PSA Series Spectrum Analyzer	3/22/2022	Annual	3/22/2023	MY46186272
Agilent	E5515C	Wireless Communications Test Set	5/4/2021	Biennial	5/4/2023	GB41450275
Agilent	N5182A	MXG Vector Signal Generator	6/21/2022	Annual	6/21/2023	MY47420651
Agilent	N9020A	MXA Vector Signal Analyzer	3/22/2022	Annual	3/22/2023	MY50200571
Amplifier Research	1S1G6	Amplifier	CBT	N/A	CBT	343971
Anritsu	MA24106A	USB Power Sensor	8/10/2021	Annual	8/10/2022	1231535
Anritsu	MA24106A	USB Power Sensor	8/10/2021	Annual	8/10/2022	1231538
Anritsu	MA2411B	Pulse Power Sensor	8/10/2021	Annual	8/10/2022	1207364
Anritsu	MA2411B	Pulse Power Sensor	4/29/2022	Annual	4/29/2023	1207470
Anritsu	Microwave Peak Power Sensor	Microwave Peak Power Sensor	5/9/2022	Annual	5/9/2023	11678
Anritsu	ML2496A	Power Meter	2/11/2022	Annual	2/11/2023	1405003
Anritsu	MS2028C	Vector Network Analyzer	5/4/2022	Annual	5/4/2023	1204153
Anritsu	MT8000A	Radio Communication Test Station	3/30/2022	Annual	3/30/2023	6261914237
Anritsu	MT8820C	Radio Communication Analyzer MT8820C	10/4/2021	Annual	10/4/2022	6201240328
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	7/18/2021	Annual	7/18/2022	6201381794
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	9/26/2021	Annual	9/26/2022	6201524637
Anritsu	MT8821C	Radio Communication Analyzer MT8821C	3/31/2022	Annual	3/31/2023	6201664756
Anritsu	MT8862A	Wireless Connectivity Test Set	10/27/2021	Annual	10/27/2022	6261782395
Control Company	4040	Therm./ Clock/ Humidity Monitor	1/21/2022	Annual	1/21/2023	160574418
Control Company	4352	Ultra Long Stem Thermometer	1/21/2022	Annual	1/21/2023	160508097
Keysight Technologies	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	9/27/2021	Annual	9/27/2022	MY53401181
Keysight Technologies	N9020A	MXA Signal Analyzer	4/14/2022	Annual	4/14/2023	MY48010233
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Rohde & Schwarz	CMU200	Base Station Simulator	N/A	N/A	N/A	836371/0079
MCL	BW-N10W5+	Attenuator	CBT	N/A	CBT	1507
MCL	BW-N3W5+	Attenuator	CBT	N/A	CBT	1608
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	BW-N10W5+	Attenuator	CBT	N/A	CBT	1350
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	PWR-4GHS	USB Power Sensor	CBT	N/A	CBT	11710030062
Mini-Circuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	RB979500903
Mini-Circuits	UNAT-3+	Attenuator	CBT	N/A	CBT	UUB9101643
Mini-Circuits	VAT-10+	Attenuator	CBT	N/A	CBT	31618
Mini-Circuits	VAT-3+	Attenuator	CBT	N/A	CBT	31647
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	31634
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Mitutoyo	500-196-30	CD-6"ASX 6inch Digital Caliper	2/16/2022	Triennial	2/16/2025	A20238413
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-6	Dual Directional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	1/11/2022	Annual	1/11/2023	101699
Seekonk	NC-100	Torque Wrench (8" lb)	8/5/2020	Biennial	8/5/2022	N/A
SPEAG	DAK-12	Dielectric Assessment Kit (10MHz - 3GHz)	3/21/2022	Annual	3/21/2023	1102
SPEAG	DAK-3.5	Dielectric Assessment Kit	10/20/2021	Annual	10/20/2022	1091
SPEAG	CLA-13	Confined Loop Antenna	9/16/2021	Annual	9/16/2022	1002
SPEAG	D1750V2	1750 MHz SAR Dipole	4/20/2022	Annual	4/20/2023	1051
SPEAG	D1750V2	1750 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	1104
SPEAG	D1765V2	1750 MHz SAR Dipole	5/14/2021	Biennial	5/14/2023	1008
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2021	Annual	10/22/2022	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	10/22/2021	Annual	10/22/2022	5d080
SPEAG	D1900V2	1900 MHz SAR Dipole	4/14/2022	Annual	4/14/2023	5d141
SPEAG	D1900V2	1900 MHz SAR Dipole	9/21/2021	Annual	9/21/2022	5d149
SPEAG	D1900V2	1900 MHz SAR Dipole	8/10/2020	Biennial	8/10/2022	5d180
SPEAG	D1900V2	1900 MHz SAR Dipole	9/10/2020	Biennial	9/10/2022	5d181
SPEAG	D2450V2	2450 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	797
SPEAG	D2450V2	2450 MHz SAR Dipole	2/22/2022	Annual	2/22/2023	882
SPEAG	D2450V2	2450 MHz SAR Dipole	11/9/2021	Annual	11/9/2022	921
SPEAG	D2450V2	2450 MHz SAR Dipole	11/25/2021	Annual	11/25/2022	981
SPEAG	D2600V2	2600 MHz SAR Dipole	4/14/2021	Biennial	4/14/2023	1004
SPEAG	D2600V2	2600 MHz SAR Dipole	9/9/2020	Biennial	9/9/2022	1069
SPEAG	D2600V2	2600 MHz SAR Dipole	11/12/2019	Triennial	11/12/2022	1071
SPEAG	D2600V2	2600 MHz SAR Dipole	8/18/2021	Annual	8/18/2022	1126
SPEAG	D3500V2	3500 MHz SAR Dipole	8/16/2019	Triennial	8/16/2022	1055
SPEAG	D3500V2	3500 MHz SAR Dipole	1/21/2020	Triennial	1/21/2023	1097
SPEAG	D3500V2	3500 MHz SAR Dipole	6/9/2021	Annual	6/9/2022	1126
SPEAG	D3700V2	3700 MHz SAR Dipole	10/17/2019	Triennial	10/17/2022	1002
SPEAG	D3700V2	3700 MHz SAR Dipole	1/19/2021	Biennial	1/19/2023	1018
SPEAG	D3900V2	3900 MHz SAR Dipole	11/13/2020	Biennial	11/13/2022	1062
SPEAG	D3900V2	3900 MHz SAR Dipole	6/10/2021	Biennial	6/10/2023	1073
SPEAG	D5GHV2	5 GHz SAR Dipole	1/10/2022	Annual	1/10/2023	1057
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/15/2021	Annual	9/15/2022	1191
SPEAG	D750V3	750 MHz SAR Dipole	2/14/2022	Annual	2/14/2023	1046
SPEAG	D750V3	750 MHz SAR Dipole	3/14/2022	Annual	3/14/2023	1054
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2021	Annual	10/19/2022	1161
SPEAG	D835V2	835 MHz SAR Dipole	4/14/2022	Annual	4/14/2023	4d119
SPEAG	D835V2	835 MHz SAR Dipole	1/21/2021	Biennial	1/21/2023	4d132
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2021	Annual	10/19/2022	4d133
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2022	Annual	1/13/2023	793
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/16/2022	Annual	3/16/2023	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/10/2021	Annual	11/10/2022	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/13/2021	Annual	9/13/2022	1364
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/14/2022	Annual	4/14/2023	1402
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/22/2022	Annual	2/22/2023	1403
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/13/2022	Annual	4/13/2023	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/15/2021	Annual	6/15/2022	1532
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/14/2022	Annual	1/14/2023	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/13/2021	Annual	7/13/2022	1583
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/21/2022	Annual	2/21/2023	1645
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/11/2021	Annual	11/11/2022	1646
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/14/2022	Annual	3/14/2023	1652
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/21/2021	Annual	6/21/2022	1676
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/10/2022	Annual	5/10/2023	1678
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/4/2021	Annual	8/4/2022	1680
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/3/2021	Annual	8/3/2022	1681
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/6/2021	Annual	8/6/2022	1683
SPEAG	EX3DV4	SAR Probe	1/19/2022	Annual	1/19/2023	3837
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7406
SPEAG	EX3DV4	SAR Probe	7/20/2021	Annual	7/20/2022	7410
SPEAG	EX3DV4	SAR Probe	2/22/2022	Annual	2/22/2023	7427
SPEAG	EX3DV4	SAR Probe	6/21/2021	Annual	6/21/2022	7491
SPEAG	EX3DV4	SAR Probe	3/21/2022	Annual	3/21/2023	7527
SPEAG	EX3DV4	SAR Probe	11/16/2021	Annual	11/16/2022	7538
SPEAG	EX3DV4	SAR Probe	4/22/2022	Annual	4/22/2023	7546
SPEAG	EX3DV4	SAR Probe	9/20/2021	Annual	9/20/2022	7552
SPEAG	EX3DV4	SAR Probe	9/17/2021	Annual	9/17/2022	7558
SPEAG	EX3DV4	SAR Probe	1/19/2022	Annual	1/19/2023	7570
SPEAG	EX3DV4	SAR Probe	3/22/2022	Annual	3/22/2023	7637
SPEAG	EX3DV4	SAR Probe	11/21/2021	Annual	11/21/2022	7639
SPEAG	EX3DV4	SAR Probe	2/24/2022	Annual	2/24/2023	7640
SPEAG	EX3DV4	SAR Probe	4/20/2022	Annual	4/20/2023	7659
SPEAG	EX3DV4	SAR Probe	5/18/2022	Annual	5/18/2023	7660
SPEAG	EX3DV4	SAR Probe	8/5/2021	Annual	8/5/2022	7670
SPEAG	EX3DV4	SAR Probe	9/6/2021	Annual	9/6/2022	7674
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237

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.

15 MEASUREMENT UNCERTAINTIES

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	1.732	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	1.732	1	1	0.1	0.1	∞
Modulation Response	E.2.5	4.8	R	1.732	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	1.732	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	3	R	1.732	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.8	R	1.732	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E.6.3	6.7	R	1.732	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E.5	4	R	1.732	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	1.732	1	1	2.9	2.9	∞
SAR Scaling	E.6.5	0	R	1.732	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	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E.3.4	0.6	R	1.732	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

16 CONCLUSION

16.1 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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